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COASTAL ZONE  
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# PERQUIMANS COUNTY

## Land Development Plan

N.C. COASTAL RESOURCES COMMISSION

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COASTAL ZONE  
INFORMATION CENTER

LAND DEVELOPMENT PLAN

AS  
MANDATED  
BY

THE COASTAL AREA MANAGEMENT ACT  
OF 1974

PERQUIMANS COUNTY  
TOWN OF HERTFORD

1976

N.C. COASTAL RESOURCES COMMISSION

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## INDEX TO STANDARD FORMAT

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## INTRODUCTION

The purpose of the 1974 Coastal Area Management Act passed by the General Assembly was to prepare coastal North Carolina for the tremendous growth in population and industry that is expected to occur. It is an effort to plan for growth and development in an orderly fashion so that mistakes which have already been made in other coastal states will not be repeated in North Carolina.

To coordinate this tremendous undertaking, the Coastal Resources Commission has been appointed by the Governor from lists of nominees submitted by local governments throughout the twenty coastal counties. All commissioners are residents of the coast and share a common concern for its future. Their task was to assemble the plans submitted by local governments into a coherent framework; making sure that all plans conform to the guidelines of the Act, and do not conflict with each other. They are also charged with the responsibility of making sure that periodic reviews of the plans are undertaken by local government and necessary revisions made to reflect changing public attitudes and economic trends.

In order to improve communication between the Coastal Resources Commission and local governments, the Coastal Resources Advisory Council was created with appointed representatives of local government and professional people with expertise in fields associated with

coastal management. This Council serves to keep the Commission informed as to local public opinion and professional judgements associated with specific issues. This blend of local citizens and professionals serves to assure that the Commission will receive balanced advice and recommendations from the Council.

It is the responsibility of local governments, under the Act, to submit land use plans to the Commission; plans which follow the guidelines of the Act and the desires of local people. Particular emphasis has been placed on public participation and the identification of local goals and objectives. It has been recognized by the Commission that public participation is essential to insure local understanding and support of the plans. As a result, such participation has been monitored in each of the localities submitting plans, in order to assure that the public was adequately involved in the planning process.

Although final approval of the plans rests with the Coastal Resources Commission, local government was given the initiative and a wide latitude within which to work. Before individual plans could be submitted to the Commission for review, they had to be assembled by local planning boards and discussed at length throughout the local government area. The function of the Commission is basically to supervise and suggest areas in which the initial plans

may be improved or brought into compliance with the guidelines of the Coastal Area Management Act.

Legislative Goals of the Coastal Area Management Act

- A. To provide a management system capable of preserving and managing the natural ecological conditions of the estuarine system, the barrier dune system, and the beaches, so as to safeguard and perpetuate their natural productivity and their biological, economic and aesthetic values.
- B. To insure that the development or preservation of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water for development, use, or preservation based on ecological considerations.
- C. To insure the orderly and balanced use and preservation of our coastal resources on behalf of the people of North Carolina and the nation.
- D. To establish policies, guidelines, and standards for the conservation of resources; the economic development of the coastal area; the use of recreational lands and tourist facilities; the wise development of transportation and circulation patterns; the preservation and enhancement of historical, cultural and scientific aspects of the region; and the protection of common law and public rights in the lands and waters of the coastal area.

### The Town and County Planning Relationship

One of the most important aspects of Coastal Area Management, and one which has been continually stressed, is coordination of planning efforts in adjoining jurisdictions. When completed, the twenty (20) individual county land use plans will form the basis for a "comprehensive plan for the protection, preservation, orderly development, and management of the coastal area of North Carolina," which is the primary objective of the Act.

This means that Perquimans County must not only coordinate its efforts with neighboring counties, but also with the Town of Hertford, as well. Although a single "County Land Use Plan" has been developed, both Perquimans County and the Town of Hertford conducted their planning efforts on an independent basis. Both governmental entities have separate planning boards which developed the land use plan for their respective jurisdictions. A spirit of cooperation and coordination of activities was necessary in order to assure that conflicting land uses would not occur where Town and County planning jurisdictions meet.

Perquimans County in its planning effort was responsible for the entire County, other than the Town of Hertford and its extraterritorial limit. The Town of Winfall did not meet the population requirements necessary to undertake planning activities so this responsibility was accepted by the County Com-

mission and Planning Board. The existing communities, likewise, come under County jurisdiction and are incorporated in County planning efforts.

The Town of Hertford planning jurisdiction consists of the present Town Limits and the designated Extraterritorial Limit. The Town Planning Board and the Town Council worked closely to provide for the orderly growth of Hertford, and to preserve the type of environment that exists currently.

Out of the efforts of a wide variety of local citizens working for both the County and the Town of Hertford, the Perquimans County Land Use Plan was developed. The fact that both groups chose to adopt a single plan is indicative of the spirit of cooperation that is characteristic of local residents not only in Coastal Area Management but in all areas of endeavor.

#### GENERAL INFORMATION

##### Climate

Perquimans County, like the rest of northeastern North Carolina, has basically a moderate climate. Over the ten year period from 1959 to 1968, the average annual temperature was 60.9 degrees. Low was an average of 42.3 degrees in January, and high was 78.3 degrees in July. Precipitation averaged 49.1 inches annually over the same period with snowfall averaging only 0.1 inches annually. The frost-free growing season is approximately 217 days in length.

### Physiography

Perquimans County consists of 323 square miles of surface area, of which only 246 are actual land area. It is located in the Northeast Coastal Plain Physiographic Province, bordered by Gates, Chowan and Pasquotank counties and the Albemarle Sound to the south.

The area, itself, is generally level although low-lying. The highest elevation is 51 feet above sea level and the soils consist of soft sediment, with little or no underlying rock near the surface. The County is drained primarily by the Little, Perquimans and Yeopim rivers.

## EXISTING POPULATION

### Perquimans County

Perquimans County had a total population of 8,351 according to the 1970 Census and had a population density of 33.9 persons per square mile. It is divided into five separate townships and has two incorporated municipalities. Both the Towns of Hertford (population 2,023) and Winfall (population 581) are located in the central part of the County bordering the Perquimans River.

As shown in Table 1, the only area to experience any growth between 1960 and 1970 was the Town of Winfall. However, this can be almost entirely attributed to annexation during the period. Parkville Township, of which Winfall is a part, lost population from 1960 to 1970 as did the other four townships. Census figures indicate that the County, as a whole, has been slowly losing population since 1940.

*Perquimans County is designated as a totally rural County in the 1970 Census.* The percent of the population designated as rural farm is placed at 69.5 percent with the remainder, 30.5 percent, classified as rural nonfarm. This compares to state averages of 10.4 percent rural farm and 44.6 percent rural nonfarm. The designation of urban, which comprises 45.0 percent of the state population, is entirely absent in Perquimans County. Hertford, which is the largest town in the County, is still small enough to be described as *rural* by the U.S. Census.



Table 1

Perquimans County and the Town of HertfordTotal Population by Township

<u>Perquimans by Township</u>	<u>1960</u>	<u>1970</u>	<u>% Change</u>
Belvidere Township	1,402	1,265	- 9.8
Bethel Township	898	851	- 5.2
Hertford Town (part)	-	14	-
Hertford Township	3,111	2,763	- 11.2
Hertford Town (part)	2,068	2,009	- 2.9
New Hope Township	1,720	1,636	- 4.9
Parkville Township	2,047	1,836	- 10.3
Hertford Town (part)	-	-	-
Winfall Town (all)	269	581	+ 116.0
Totals	9,178	8,351	- 9.0

---

Source: 1970 Census

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*Population figures for 1960 and 1970 indicate that the County has had and continues to have a disproportionate number of persons of retirement age. This contrasts sharply with the low percentage of the population in the 25-44 age group. The number of school age children, on a percentage basis, is comparable to the state average.*

The median age for the State of North Carolina was 26.5 in 1970 but it was 31.1 in Perquimans County. The percentage of persons 65 years of age and older is 13.2 for the County compared to 7.7 for the state, partially explaining the differential in median age. For children under 18 the percentage was 35.1 for the County and 34.6 for the state. Table 2 on the following page contains more precise information for the County.

Table 2

Existing Population in Perquimans County

	<u>County</u>
under 5	624
5-14	1,721
15-24	1,299
25-34	822
35-44	827
45-54	1,011
55-64	947
65 and over	1,100
Median age	31.1
Dependency Ratio	93.1
Under 18	2,926
Percent under 18	35.1
Percent over 64	13.2

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Source: 1970 Census

---

The percentages of those persons over 64 and under 18 years of age, in conjunction with the low percentage of persons between 25 and 44, give the County a higher dependency ratio than is found in either state or regional averages. For Perquimans County the ratio is 93.1 to 100. It is 87.2 to 100 for all of Region R and 74.8 to 100 for the entire state. This indicates that for every 100 persons between the ages of 18-64 there are 93.1 persons either under 18 or over 64. Persons over 64 are considered as retired and children under 18 are assumed to be in school; with both considered to be *dependent* on the working age population.

The greatest changes in population from 1960 to 1970 occurred in the under 14 and over 54 age groups, as

shown in Table 3. The number of school-age children declined fairly substantially while the number of persons over age 54 showed approximately a ten percent increase. Median age over the ten year period went from 26.2 in 1960 to 31.2 in 1970. *In short, the trend was toward an increased number of older citizens and a reduced number of children and young adults.*

Table 3

Population by Ages, 1960 and 1970

	<u>1960</u>	<u>1970</u>
under 5	1,061	624
5-14	2,105	1,721
15-24	1,242	1,299
25-34	909	822
35-44	1,078	827
45-54	1,071	1,011
55-64	794	947
65 and over	<u>918</u>	<u>1,100</u>
Total	9,178	8,351

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Source: 1960 and 1970 Census

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A breakdown of the population by race and age, as shown in Table 4 on the following page, indicates that the decrease in the population between the ages of 25 to 54, and children under 14, was much more pronounced among blacks than whites. *A conspicuous item in both Tables 3 and 4 is the small number of persons in the 25 to 34 age bracket, both in 1960 and 1970. Out-migration of persons in that group is apparently substantial.*

Table 4  
Population Breakdown by Race and Age  
1960-1970

	<u>Black</u>		<u>White</u>	
	<u>1960</u>	<u>1970</u>	<u>1960</u>	<u>1970</u>
under 5	614	266	447	357
5-14	1,201	897	904	821
15-24	640	644	602	654
25-34	403	280	506	540
35-44	397	310	681	514
45-54	413	343	658	668
55-64	293	330	501	623
65 and over	<u>342</u>	<u>394</u>	<u>576</u>	<u>705</u>
Total	3,041	3,464	4,982	4,882

Source: 1960 and 1970 Census

#### Town of Hertford

The Town of Hertford is located in the central portion of Perquimans County on the Perquimans River. It is an agriculturally-oriented community and the seat of county government. The population, according to the 1970 Census, was 2,023. Although the County has slowly declined in population for many decades, the population of the Town has been approximately 2,000 since 1910.

Perquimans County is divided into five separate Townships with the Town of Hertford occupying territory in three of the five. However, most of the Town is located in Hertford Township. As shown in Table 1, of the 2,763 residents of the Township 2,023 were Town residents in 1970.

*Population figures for 1970 indicate that the Town has a higher percentage of persons of retirement age than the state average. Of the Town population, 15.1 percent are over 64 years of age. This compares to 13.2 percent for Perquimans County and 7.7 percent for the state. Also indicated is the fact that the school age population for the Town is smaller on a percentage basis than either that of the County or the state. The percentage of the Town population under 18 years of age is 32.3 percent, as compared to 35.1 percent for the County and 34.6 percent for the state.*

Those two figures, the percentages of persons over 64 and under 18, combine to give the Town a somewhat higher dependency ratio than the state average, but a lower one than is found in Perquimans County. The state average is 74.8 to 100, with the Town average at 88.4 to 100 and the County (including the town) average at 93.1 to 100. The ratio for the ten counties of Region R is 87.2 to 100. This indicates that for every 100 persons aged 18 to 64 in the Town, there are 88.4 who are either under 18 or over 64. Persons over 64 are considered to be retired and children under 18 are assumed to be in school. Both are *dependent* on the working age population in theory.

Tables 5 and 6, as shown on the next page, illustrate these figures. Table 6 reveals that the trend is even more severe among blacks than whites. There are a conspicuously low number of blacks between the ages of 25 and 54,

especially among males. Black males outnumber black females until the age group of 25-35 is reached. At that point females are in the majority, suggesting a substantial out-migration of young, working-age black males.

Table 5

Total Population by Age - 1970  
Town of Hertford

	<u>Total</u>	<u>Male</u>	<u>Female</u>
under 5	146	75	71
5-14	377	182	195
15-24	278	139	139
25-34	208	97	111
35-44	192	92	100
45-54	235	97	138
55-64	282	125	157
65 and over	<u>305</u>	<u>121</u>	<u>184</u>
Total	2,023	928	1,095

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Source: 1970 Census

---

Table 6

Black Population by Age and Sex - 1970  
Town of Hertford

	<u>Total</u>	<u>Male</u>	<u>Female</u>
under 5	62	32	30
5-14	187	100	87
15-24	135	76	59
25-34	72	31	41
35-44	65	28	37
45-54	81	34	47
55-64	101	47	54
65 and over	<u>107</u>	<u>41</u>	<u>66</u>
Total	810	389	421

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Source: 1970 Census

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### Town of Winfall

The Town of Winfall is located in the central portion of Perquimans County and is an agriculturally-oriented community. The total population, according to the 1970 Census, was 581 persons. As previously stated, Winfall was the only area within the County to increase in population from 1960 to 1970, but this was due almost entirely to annexation.

Figures shown on this page in Table 7 indicate that the percentage of the population in each group corresponds roughly with the same group on a county-wide basis. In this respect, the Town shares the same population characteristics as the County, and compares to the State of North Carolina and Region R averages in much the same way.

Table 7  
Existing Population by Age  
1970

	<u>Winfall</u>	<u>by %</u>	<u>County</u>	<u>by %</u>
Under 5	45	7.8	624	7.6
5-14	101	17.4	1,721	20.2
15-24	92	15.8	1,299	15.6
25-34	63	10.8	822	9.9
35-44	52	9.0	827	9.9
45-54	85	14.6	1,011	12.2
55-64	70	12.0	947	11.3
65 and over	73	12.6	1,100	13.3

---

Source: 1970 Census

---

The dependency ratio, an important socio-economic indicator, is 77.7 to 100 for the Town of Winfall. This indicates that for every 100 persons aged 18 to 64 there are 77.7 persons either under 18 or over 64 years of age. In this respect, the Town would appear to be better off than Perquimans County as a whole.

An examination of the Town by race indicates that approximately half (43.2 percent) of the population was black in 1970. This compared to a 41.5 percent figure for the county as a whole and indicates that Winfall has approximately the same racial mix of the County.



## EDUCATION

### Perquimans County

*The average educational attainment for persons twenty-five and over in the State of North Carolina was 10.6 years in 1970, but for residents of Perquimans County it was lower at 9.7 years. This situation, however, may improve in the future since there were only 9.2 percent of all persons 14 to 17 years of age in the County that were not in school. This compares favorably to a state average of 11.1 percent. Of persons 16 to 17 years of age, only 15.2 percent in the County were not in school compared to 16.5 percent in the state.*

The probable cause of the low average educational attainment for adults twenty-five and over is the low percentage of college-educated persons residing in the County. Again utilizing the twenty-five and over age group, 6.1 percent of the population of the County had completed four or more years of college and 7.2 percent had completed one to three years. This compares with state averages of 8.5 and 8.4 percent respectively. The percentage of high school graduates on both the state and County levels was approximately the same.

Unfortunately, figures are not available for either of the Towns of Hertford or Winfall due to their small size. It must be assumed, however, that County figures are generally applicable.

## EXISTING ECONOMY

### Perquimans County

*Perquimans County is basically an agricultural area and has been for the last three hundred years.* According to the 1969 Census of Agriculture, there were 492 farms in the County with an average size of 165.5 acres. The actual distribution of farm sizes is shown on the following page on Table 9.

Average farm acreage in Perquimans County has been increasing, as it has throughout the nation. The small farmer is incapable of realizing the economies of scale possible with the larger, more mechanized operations. In that County, many of the smaller farms are actually leased to other individuals who can, by acquiring leases on several adjoining tracts of land, farm a large acreage without owning it.

While the size of the average farm continues to increase, so does the amount of cropland. Particularly in the last five or six years, a great amount of land has been cleared for agricultural use and this trend is presently continuing.

The most important crops being grown in the County are soybeans and corn. Peanuts, wheat and other crops made up only sixteen percent of all crops in 1974 in terms of acreage. For a more detailed discussion of acreages and crops, see Appendix C of this document. The second largest industry in the County is forestry. Two large forest-products companies, Weyerhaeuser and Union Camp, have extensive land

Table 8  
COMMUTING PATTERNS FOR PERQUIMANS COUNTY

County	1960 Commuting		1970 Commuting	
	Out	In	Out	In
Camden	--	4	21	0
Chowan	61	56	186	71
Currituck	--	4	0	0
Gates	25	24	51	0
Martin	0	0	0	13
Pasquotank	297	55	350	102
Tyrrell	--	8	14	6
Washington	7	--	8	35
Isle of Wight (Virginia)	0	0	8	--
Nanesmond (Virginia)	20	--	17	0
Norfolk (Virginia)	160	--	171	--
(Chesapeake City)	0	--	(14)	(--)
(Norfolk City)	0	--	(102)	(--)
(Portsmouth City)	0	--	(55)	(--)
Princess Anne (Virginia)	0	--	7	9
(Virginia Beach City)	0	--	(7)	(9)
Elsewhere	<u>87</u>	<u>22</u>	<u>81</u>	<u>32</u>
Total	657	173	914	268
Live and Work in				
Perquimans County	2,124		1,673	
Employed Residents	2,781		2,587	
Persons Working In				
Perquimans County	2,297		1,941	
Commuting - Gain (+) or Loss (-)		-484		-646

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Source: North Carolina Commuting Patterns - 1960 & 1970  
Employment Security Commission of North Carolina  
Bureau of Employment Security Research  
Job Market Research Center, Raleigh, N.C. (March 1974).

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holdings in addition to the many commercial stands belonging to private individuals. Dominant softwood species found in the County are varieties of pine. Dominant hardwood species are oak, gum and cyprus. *Recent trends in lumber harvest indicate a favorably growth-over-cut situation.* For more precise information on acreages and harvest, see Appendix C of this document.

According to the 1970 Census; 445 persons or 16.8 percent of the total county work force were employed in either agriculture, forestry or fisheries. Farm population, which made up the bulk of that number, declined from 4,101 to 2,625 between 1960 and 1970. This was due to increasing mechanization and the decrease in the total number of farms in the County. Farm laborers and small farmers that have ceased agricultural operations have been forced to seek employment in other sectors of the economy. This has occurred not only in the County but nationally as well in all agricultural regions.

Figures on Table 9 on this page indicate that in 1960 there were 2,124 persons living and working in the County with another 657 out-commuting to work and 173 in-commuting. In 1970, the number of persons living and working in the County had declined to 1,673 while both in-commuters and out-commuters increased. Overall, the commuting loss increased from 484 to 646 during the ten year period and the percentage of the County work force employed outside

Table 9  
Annual Average Civilian Work Force Data  
Perquimans County

Year	1966	1967	1968	1969	1970	1971
Civilian Work Force	2,970	2,870	2,690	2,660	2,640	2,710
Total Employment	2,780	2,690	2,530	2,520	2,480	2,560
Nonagricultural Wage & Salary Employment	1,240	1,230	1,200	1,220	1,250	1,320
Total Employment	190	170	160	140	160	150
Unemployment As A Percent of Civilian Work Force	6.4	5.9	5.9	5.3	6.1	5.5

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Source: Employment Security Commission

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the County increased from 24 to 34.2 percent.

*The reason for the large number of out-commuters from Perquimans County is the relatively small industrial and manufacturing sector of the County's economy. Although efforts are underway to strengthen this sector, it currently does not provide enough jobs for county residents. Workers are forced to commute to neighboring counties or the tidewater Virginia area in search of employment opportunity. Many young working*

age adults leave the County entirely, for the same reason. Table 9 reflects civilian work force data from 1966 to 1970 for those persons working in the County. It does not include those residents working outside the County.

*In effect, the rural environment of the County directly reflects the lack of industrialization.* Although job opportunity is scarce, most residents appear to prefer the situation as it exists. The economic tradeoffs inherent in the situation constitute one of the conscious decisions that will have to be made again and again in the future. Obviously the County cannot pursue a pure policy of attracting industry and jobs, and retain the rural character of the area.

Table 9 indicates that in 1971, the total employment in the County had declined slightly from 1966. Unemployment during the same period declined from 6.4 percent to 5.5 percent; both of which are not significantly different from state averages.

An examination of the work force in the County by *occupation* reveals that 15.7 percent of all employed persons were engaged in farm-related activities. Actual figures are provided in Table 10 on this page.

Median family income in 1970 for County residents was \$5,124 compared to a state average of \$7,774. In 1960 the median family income was \$3,432 compared to \$3,596 for the entire state, indicating that by 1970 the gap had widened

considerably. In that year, thirty-five percent of all families in the County had incomes below the poverty level and only three point four percent had incomes in excess of \$15,000. This compares rather unfavorably to state averages of 16.3 and 11.5 percent, respectively.

Table 10

Earnings by Occupation for Perquimans County  
1970

Total Employed, 16 and Over:

<u>Occupation</u>	<u>Number</u>	<u>Male</u>	<u>Female</u>
Professional, technical & kindred workers	268	\$6,839	-
Managers and administrators, except farm	197	-	-
Sales workers	123	-	-
Clerical workers	254	-	\$3,091
Craftsmen, foremen and kindred workers	391	\$5,921	-
Operatives, except transport	363	\$5,008	\$2,885
Transport equipment operatives	135		
Laborers, except farm	165	\$3,427	-
Farmers and farm managers	278	\$2,204	-
Farm laborers and foremen	139	\$1,333	-
Service workers, except private household	220	-	-
Private household workers	<u>115</u>	-	-
TOTAL	2,648		

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Source: 1970 Census

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What must be taken into account, however, is the relatively low cost of living in the County. Although residents of urban areas tend to have higher incomes, the *cost of living* tends to be higher in such areas. So even though county residents have lower incomes on an absolute scale, this does not mean that actual purchasing power is proportionately less. It can safely be assumed that the cost of living is substantially lower in Perquimans County than in the state as a whole, thereby explaining, in part, the gap in average family income.

According to figures on Table 10, the group of farm-related workers was certainly the least well-off fiscally. All occupations connected with industry and manufacturing were considerably better-paying.

An important indicator of economic prosperity is the amount of gross retail sales. Compared to its three immediate neighbors, Chowan, Gates and Pasquotank counties; Perquimans County ranked third, with more sales than Gates County.

Gross retail sales in Perquimans County totaled approximately \$15,003,000 as shown in Table 11. In the twenty county Coastal Region of North Carolina it was ranked fourteenth in total sales.



Table 11

GROSS RETAIL SALES BY COUNTY  
Calendar Year 1973

<u>County</u>	<u>Gross Sales</u>
Craven County	\$194,039,000
Pitt County	\$181,172,000
Halifax County	\$123,922,000
Beaufort County	\$ 92,615,000
Edgecombe County	\$ 76,325,000
Pasquotank County	\$ 72,137,000
Martin County	\$ 50,499,000
Hertford County	\$ 50,291,000
Bertie County	\$ 29,620,000
Dare County	\$ 26,131,000
Chowan County	\$ 25,244,000
Washington County	\$ 25,017,000
Northhampton County	\$ 24,065,000
Perquimans County	\$ 15,003,000
Gates County	\$ 12,176,000
Currituck County	\$ 10,737,000
Pamlico County	\$ 7,469,000
Hyde County	\$ 5,931,000
Tyrrell County	\$ 5,890,000
Camden County	\$ 3,423,000

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Source: North Carolina Business Patterns, 1974

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Town of Hertford

The Town of Hertford serves as a residential area and commercial center for Perquimans County. The central business district houses almost all of the larger retail establishments in the County.

Due to the fact that the population was under 2,500 persons in 1970, precise figures are not available for the Town. It must be assumed, however, that data on Perquimans

County is substantially the same for the Town. As a practical point, the economy of the County determines that of the Town. Hertford is the market place of the County and derives its economic prosperity from the outlying farms and businesses.

#### Town of Winfall

For the same reason as stated above, precise data on the Town is not available. Winfall serves primarily as a residential area with only limited commercial facilities. Like the Town of Hertford, the economy of Perquimans County is the economy of Winfall.

## HOUSING

### Perquimans County

According to 1970 Census figures, Perquimans County had a total of 2,899 housing units, of which 2,497 were occupied on a full-time or seasonal basis and 402 were vacant year-round. Owner occupied units numbered 1,749 or 70.0 percent of all occupied units. *This indicates a slightly higher rate of home-ownership in the County than the state average of 65.3 percent, but it does not vary significantly from the Region R average of 69.9 percent.*

The number of Negro-occupied units in the County was 863 with 530 units being owner-occupied. This translates into a 61.4 percent home-ownership rate and compares quite favorably to the state average of 45.5 percent. The rate for Region R is 58.9 percent which would indicate that Perquimans County does not differ significantly with neighboring counties.

*Using 1.01 or more persons per room as an indicator of overcrowding, there were 239 such housing units in the County or 9.6 percent of all occupied units. This compares favorably with the state average of 10.2 percent and the Region R average of 11.1 percent. The percentage of severely overcrowded units (1.51 or more persons per room) in the County was 3.2 percent, compared to a state average of 3.0 percent and a Region R average of 3.6 percent.*

The number of Negro-occupied units classified as

overcrowded was 173, or 20.0 percent of all Negro-occupied units. This compares quite favorably to state and Region R averages of 25.3 and 25.4 percent, respectively. Although overcrowding in the County is more prevalent among black than white-occupied housing units, the problem is not as serious as it is in Region R and the state as a whole. It remains, however, a problem that needs to be dealt with not only in Perquimans County but elsewhere as well.

*With regard to plumbing facilities, 30.5 percent of the occupied housing units in the County were defined by the 1970 Census as inadequate. A housing unit with complete plumbing facilities is defined as having hot piped water, flush toilet which is not shared with any other households, and a bathtub or shower which is also not shared. These represent the basic facilities required for minimum personal sanitary practice. This percentage of 30.5 represents a definite local problem area when compared to the state average of 14.4 percent and the Region R average of 25.5 percent.*

The basic problem in 1970 appears to have been the lack of toilet facilities. Almost one in four housing units in the County (24.5 percent) lacked such a facility compared with state and Region R averages of 11.9 and 21.2 percent, respectively.

*Among Negroes the problem of inadequate plumbing facilities was particularly severe. Fully 66.3 percent of all Negro-occupied housing units in the County were inadequate,*

compared to a state average of 38.4 percent and a Region R average of 59.4 percent. So while the problem exists on both a state and regional level, it was even more pronounced in Perquimans County.

Tables 12 and 13 on this and the following page contain structural information placing the housing situation within Perquimans County and its relation to Region R in perspective. Figures on these two tables are adjusted for 1973 from 1970 Census information.

#### Town of Hertford

According to 1970 Census figures, the Town of Hertford had a total of 771 housing units; of which 696 were occupied on a full-time or seasonal basis and 75 were vacant year-round. Owner-occupied units numbered 420 or 60.3 percent of all occupied units. *This indicates a lower rate of home-ownership in the Town than is found in the County (70.7 percent), the region (69.9 percent) and the state (65.3 percent).*

The number of Negro-occupied units in the Town was 237 with 112 units being owner-occupied. This translates into a 47.3 percent home-ownership rate or roughly the state average (45.5 percent). It does not, however, compare favorably with the County average (61.4 percent) or the region (58.9 percent).

Since the percentage of Negro renters was so high in the Town, some attention must be paid to average monthly rent, average monthly rent for *all* renter-occupied units was 45 dollars and for *Negro*-occupied units it was 33 dollars. This compares to County averages of 39 dollars and 30 dollars per month, and Region R averages of 49 dollars and 36 dollars per month. State averages were higher at 67 dollars and 48 dollars, respectively. *So although rents would appear to be slightly higher in the Town than in the County; they are approximately the same as regional averages and substantially less than state averages.*

Using 1.01 or more persons per room as an indicator of overcrowding, there were 47 such housing units in the Town or 6.8 percent of all occupied units. This compares quite favorably with the County average (9.6 percent), the regional average (11.1 percent) and the state average (10.2 percent). The percentage of *severely* overcrowded units (1.51 or more persons per room) in the Town was 2.7 percent, compared to a County average of 3.2 percent, a Region R average of 3.6 percent and a state average of 3.0 percent. *On the whole, overcrowding does not appear to be a problem in the Town of Hertford.*

With regard to plumbing facilities, 20.3 percent of the occupied housing units in the Town were considered to be *inadequate* as defined by the 1970 Census. Although not as

Table 12

SUBSTANDARD AND DILAPIDATED HOUSING UNITS IN  
PERQUIMANS COUNTY

1973

<u>All Units</u>	<u>Total</u>	<u>Substandard Housing Units</u>	<u>Dilapidated Housing Units</u>
Owner Occupied	1749	416	23.8% <sup>1</sup>
Negro	529	310	58.6%
Non-Negro	1220	106	8.7%
Renter Occupied	751	348	46.3%
Negro	334	262	78.4%
Non-Negro	417	86	10.6%
Vacant Year Round	318	152	47.8%
For Sale	15	6	40.0%
For Rent	41	25	61.0%
Other	<u>262</u>	<u>121</u>	<u>46.2%</u>
GRAND TOTAL	2818	916	32.5% <sup>2</sup>

<sup>1</sup>Percent Total of each unit<sup>2</sup>Percent of GRAND TOTAL

Source: U.S. Department of Housing and Urban Development

Table 13

SUBSTANDARD AND DILAPIDATED HOUSING UNITS IN REGION R1973

<u>County</u>	<u>Total Units</u>		<u>Substandard Housing Units</u>		<u>Dilapidated Housing Units</u>	
Camden	1725	5.4% <sup>1</sup>	602	34.9% <sup>2</sup>	46	2.6% <sup>3</sup>
Chowan	3407	10.6%	1037	30.4%	94	2.7%
Currituck	2621	8.2%	655	25.0%	97	3.7%
Dare	3258	10.1%	410	12.6%	98	3.0%
Gates	2613	8.1%	1189	45.5%	42	1.6%
Hyde	1915	6.0%	827	43.2%	52	2.7%
Pasquotank	8634	26.9%	1495	17.3%	268	3.1%
Perquimans	2818	8.8%	916	32.5%	79	2.8%
Tyrrell	1319	4.1%	566	42.9%	37	2.8%
Washington	3810	11.9%	962	25.2%	144	3.8%
Total	32120	100.0%	8659	27.0%	957	3.0%

<sup>1</sup>Percent of TOTAL<sup>2</sup>Percent of TOTAL Substandard Housing Units<sup>3</sup>Percent of TOTAL Dilapidated Housing UnitsSource: U.S. Department of Housing and Urban Development



high a percentage of units in the Town are inadequate as is the case in the County (30.5 percent), this still represents a problem. Water and sewer service are both available to Town residents and this partially explains the differential between the two. Such services are not currently available to most county residents. *The problem remains that even with modern town services, approximately one housing unit in every five was considered to have inadequate plumbing.*

Among Negro residents of the Town the problem is particularly severe. *Fully 50.6 percent of all Negro-occupied housing in the Town is inadequate in terms of its plumbing facilities.* Although this figure compares favorably with County (66.3 percent) and Region R (59.4 percent) averages, it compares poorly with the state average of 38.4 percent. The problem is deviously more difficult at the county and regional levels because of the lack of water and sewer service in many areas. But it is also an area in need of close scrutiny in future years.

#### Town of Winfall

According to 1970 Census figures, the Town of Winfall had a total of 196 housing units; of which 188 were occupied and 8 were vacant year-round. Owner occupied units numbered 128 or 68.1 percent of all occupied units. This is approximately the same percentage in the County (70.7 percent) and Region R (69.9 percent).

The number of Negro-occupied units in the Town was 69 with 43 units being owner-occupied. This translates into a home-ownership rate of 63.2 percent, which is slightly higher than that of Perquimans County. As previously indicated, the County does not differ significantly with its neighboring counties.

Using 1.01 or more persons per room as an indicator of overcrowding, there were 11 such units in Winfall or 5.6 percent of all occupied units. This compares quite favorably with a County average of 9.6 percent, a Region R average of 11.1 percent and a state average of 10.2 percent. The percentage of *severely* overcrowded units (1.51 or more persons per room) was correspondingly low at 1.6 percent. This is half the County average and compares favorably to a regional average of 3.6 percent and a state average of 3.0 percent. Overcrowding in Negro residences was also quite low at 10.3 percent.

*With regard to plumbing facilities, 35.6 percent of the occupied housing units in the Town were defined by the 1970 Census as inadequate.* This presents a major problem to the Town when the percentage is compared to County, regional and state averages.

As in the case in Perquimans County, the major reason for such a high percentage of units having inadequate plumbing in the Town was the lack of toilet facilities. The

figure for the Town (32.6 percent) was much higher than County, regional or state percentages.

*Among Negroes the problem of inadequate plumbing was extremely severe.* Fully 79.4 percent of all Negro-occupied housing units in the Town were inadequate, compared to County, Region R and state averages of 66.3, 59.4, and 38.4 percent, respectively. While the problem exists at all levels it is much more pronounced in the Town of Winfall, and constitutes the most formidable housing problem facing the Town.

## EXISTING LAND USE

### Perquimans County

Existing land use in Perquimans County has remained basically unchanged for at least the last century. Most of the land in the County is either forested or cleared for cultivation. There are no polluting industries, or residential developments which could be classified as "high density". *There appear to be no significant compatibility problems with regard to existing land use.*

A basic area of concern, however, is the trend toward recreational and second-home development in the southern part of the county. Several areas along the Perquimans, Little, and Yeopim Rivers, and the Albemarle Sound have experienced an influx of mobile homes, campers, and summer or weekend cottages. Only a small number of new "permanent" residents have built homes in the newly developed areas.

While this has had an impact on the local economy, it is difficult to determine whether it has been beneficial or detrimental. The increased revenue which has accrued from the subdivision of land must be measured against the increased cost of providing such public services as schools, police and fire protection, and solid waste disposal. Any *social costs* involved in such development must also be considered.

Unfortunately, many of these new developments exhibit only slight regard for the natural beauty of the area, and the health and well-being of its residents. These are social

costs because they must be borne by everyone in the effected areas and by other County residents to some degree.

*In many instances land has been subdivided and sold to individuals without standard subdivision improvements being built.* Many areas have unsurfaced roads which cannot meet state standards and, more importantly, have inadequately functioning water and human waste disposal facilities.

Some lots are so small that problems arise from the use of septic tanks and wells. Soil conditions are generally unsuitable for septic tanks in this region because of soil properties and the seasonally high water table. This poses serious problems with regard to the pollution of ground and surface waters, which can create serious health hazards in the area. Eventually such pollution makes its way to the Albemarle Sound and contributes to water quality problems in that body of water. This process carries with its social costs which extend beyond Perquimans County and effect a large number of people. For a more complete discussion of water quality problems in the County and surrounding coastal waters, see Appendix D of this document.

*Another problem found in waterfront areas of the southern portion of the County is shoreline erosion.* Some areas are eroding at a significant rate, necessitating bulkheading or the construction of groins to protect property. In the absence of any bulkheading requirement on developers

or purchasers, many lots once adequate to build on are now much too small. Septic fields have been eroded, in some instances, adding to previously discussed difficulties. More precise information on shoreline erosion is found in the section entitled, Areas of Environmental Concern.

At present, approximately four thousand lots have been platted along the rivers and the Albemarle Sound, but only about half are recorded as "sold" in the office of the Perquimans County Register of Deeds. Undoubtedly more are being purchased over an extended time period but these will not be registered as sold until the final payment is made and the deed transferred.

Many of the lots in the southern part of the County are small ones designed for campers, perhaps as many as one thousand or one out of every four. Actual construction on the larger lots has occurred sporadically at best. More mobile homes have been put on lots than new homes constructed. Both the sale of lots and their subsequent development have been proceeding slowly and there is considerable room for growth in the future. Before such growth occurs, measures need to be enacted to prevent the magnification of present problems.

#### Town of Hertford

Existing land use in the Town of Hertford is basically residential and commercial with only one apparent conflict

in adjoining land uses. *At present, several gas and oil distributors have storage facilities in the Town along the riverfront.* Residences are located in adjoining or adjacent areas, and the municipal building is also located in the area.

Potential problems due to the highly flammable nature of the stored petroleum products are apparent. Still another problem involves the possibility of accidentally introducing petroleum products into the Perquimans River. Both are serious enough to warrant attention. The Town Council has responded to the problem by requesting funds from the United State Department of Housing and Urban Development to plan for the relocation of the firms. At this time, however, the problem represents the most serious compatibility problem with regard to land use.

#### Town of Winfall

The Town of Winfall does not, at the present time, manifest any significant compatibility problems or problems associated with unplanned development.

#### Existing Land Use Maps

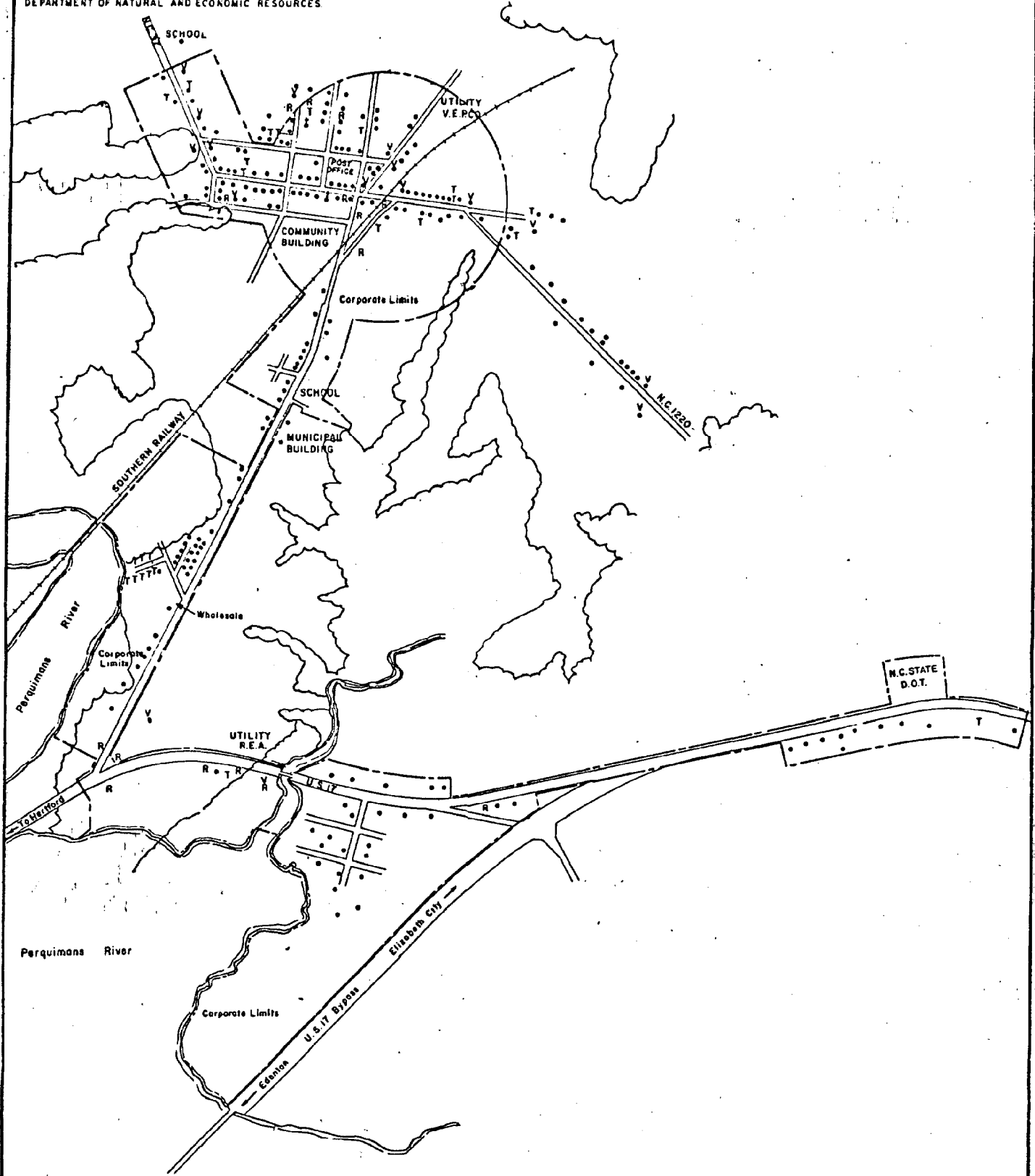
The existing land use maps for Perquimans County and the Town of Hertford were compiled from aerial photographs and actual on-site inspections. The on-site inspections were used to locate businesses and residences, and the aerial photographs

were used to delineate wetlands, forested areas and cleared land.

The existing land use map for the Town of Hertford is on a much larger scale than the single County map. This was to provide for greater detail and accuracy in and around the Town. In order to increase accuracy and detail on the County level, each quadrant contained in the single County map has been reproduced on a larger scale. For easy referencing, each quadrant is labeled individually and its location indicated on the county-wide existing land use map. These quadrants are intended to be of use to those persons requiring information concerning specific land use in the rural areas of Perquimans County.



THE PREPARATION OF THIS MAP WAS FINANCED IN PART THROUGH A PLANNING GRANT FROM THE COASTAL PLAINS REGIONAL COMMISSION, ADMINISTERED BY THE NORTH CAROLINA DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES



# WINFALL PERQUIMANS COUNTY



- LEGEND
- SINGLE FAMILY
  - T MOBILE HOME
  - C CHURCH
  - V VACANT
  - R RETAIL
  - TREE LINE

EXISTING LAND USE MAP  
(See Pocket Inside Back Cover)

## EXISTING PUBLIC FACILITIES

### Introduction

One of the most important and complex functions of local government is the provision of public services necessary for the general well-being of its citizens. The provision of such services is the primary reason that governmental entities are in existence.

In Perquimans County, such services are provided not only by County government and the Towns of Hertford and Winfall but by groups of citizens organized for the provision of a single service, as well. Various water, fire and other associations provide necessary services within what are commonly referred to as *special service districts*. These special districts are organized because of the need for a specific service in a limited area. Often the needed service cannot be provided by the governmental entity with jurisdiction in the area because of geographic or financial limitations. Perquimans County, for example, has been unable to finance a county-wide water system until just recently and this fact prompted citizens in the Woodville area to organize and finance the Inter-County Water Association. This special service district includes areas in both Perquimans and Pasquotank Counties.

Service boundaries do not always coincide with political boundaries, and even municipal and county services

are often extended to persons living outside the established political boundaries. *Public services are provided in accordance with the need for such a service and the ability of local citizens to pay.* In some cases these services are financed on a pay-as-you-go basis with established and fixed user charges. In others, where it is more difficult to determine how much a specific service is costing on an individual basis or how much each individual is benefiting, services are paid for out of general tax revenue. The service provided by a water association is an example of a service that is financed by user charges and the service of a police department is an example of a service that is financed out of general tax revenue. It is much easier to determine the quantity of water an individual uses than it is how much police protection he utilizes.

With the variety of political entities and associations which are currently providing public services in the County, it is important to minimize duplication of effort and to determine the most cost-effective method of providing such services. The concept of the most service for the least money is an important one for all consumers of public services.

The specific services to be examined in this section are:

- 1) water facilities
- 2) sewer facilities
- 3) solid waste disposal facilities
- 4) educational facilities
- 5) recreational facilities

- 6) police protection
- 7) fire and rescue services
- 8) transportation facilities (primary roads)

The facilities examined in this section are dealt with on a *functional basis*. Each of the seven (7) facilities and services are discussed in terms of the entity providing the specific service and the county-wide impact of the combined service areas.

#### Water Facilities

Currently in Perquimans County, only those persons residing in or quite near the Towns of Hertford and Winfall, and the community of Woodville have access to a public water system. Elsewhere in the County the reliance is and has been on individual wells for water.

Although the high water table makes water plentiful throughout the area, in practically every section of the County the groundwater supplies: 1) have a high iron or other mineral content, 2) and/or contain objectional amounts of hydrogen sulfide and, 3) range in hardness from hard to very hard. Existing public supply systems and most individual wells are dependent on treatment to reduce hardness and mineral content. The quantity of water available through a single well, depending on design and specific location, can vary from 100 to 500 gallons per minute. For additional information, see Appendix D of this document.

### Town of Hertford

The Town of Hertford operates the largest facility in the County, serving Town residents, several County residents close to the Town, and the Don Juan Manufacturing Company. The water supply for the system is obtained from two (2) deep wells, each capable of producing approximately four hundred gallons per minute or 500,000 gallons daily, utilizing a twelve-hour operation.

At present, according to the 1974 Perquimans County Countywide Water Study, the Town pumps an average of 230,000 gallons per day to its water customers and the wells average pumping approximately seven hours each day. *The system has a surplus pumping capacity of about forty-two percent,* utilizing the maximum of 12 pumping hours per day recommended by the State Board of Health.

The high iron content and hardness of the water from the two wells necessitates that it be treated. The operating capacity of the water treatment facility is estimated to be 500,000 gallons per day, which indicates that *the plant is currently operating at 46 percent of capacity.*

The finished water is stored in a 200,000 gallon ground storage tank. Elevated storage consists of two (2) tanks, one with a capacity of 500,000 gallons and the other with a 100,000 gallon capacity. Total storage capacity in the Town system is 800,000 gallons.

At present the Town of Hertford water system is adequate for local use. The excess pumping, treatment and storage capacities over current levels represents an important factor in local attempts to attract industry.

#### Town of Winfall

The Town of Winfall water system obtains its water supply from two (2) deep wells. Each well and pump will produce 100 gallons per minute. The Town is currently using approximately 55,000 gallons per day with their pumps operating about six hours per day. Utilizing the twelve-hour pumping day recommended by the State Board of Health, *the present pumping facility is operating at fifty percent of capacity.*

The raw water from the wells is treated to remove the iron and reduce the hardness. The design capacity of the treatment plant is 72,000 gallons per day based on a 12 hour operation. Alternating the use of the two (2) wells, using the first for twelve hours and then the second for twelve hours, design capacity can be increased to 144,000 gallons per 24-hour day. This indicates that *the treatment facility is operating at approximately 39 percent of design capacity.*

Elevated storage for the system consists of a single 100,000 gallon elevated storage tank. This storage capacity as well as the pump design and water treatment capacity are adequate for current town needs.

### Inter-County Water Association

The Inter-County water system serves residents of the Woodville community in both Perquimans and Pasquotank Counties. It has (2) deep wells each producing 75 gallons per minute and a treatment facility with the same capacity. With each well being pumped for a twelve-hour period and the treatment plant operating on a twenty-four hour basis, design capacity of the system is 108,000 gallons per day.

Present operating capacity is approximately 32,000 gallons per day or *thirty percent of design capacity*. Water is stored in a 100,000 gallon elevated storage tank.

The Inter-County system is presently more than adequate in meeting the water needs of the residents in and around the community of Woodville. There does not appear to be any need to expand the facility or upgrade the quality of the service.

### Perquimans County (proposed)

The proposed Perquimans County system will serve almost the entire County, with the exception of areas now being served by the three (3) systems already in existence. The proposed project includes the construction of: 1) a water distribution system, 2) one 400 gallons per minute water treatment plant 3) three 220 gallons per minute deep wells (minimum) and 4) three 200,000 gallon elevated storage tanks. Although the system is not designed for complete fire protec-



tion, fire hydrants are proposed in more populated areas to provide water protection and for filling water tankers. It is also proposed that water be purchased and sold in case of emergencies from the existing systems of the Towns of Hertford and Winfall and that the Inter-County system be acquired and made a part of county system.

Within the area of service for the proposed system, excluding Inter-County, there are approximately 1,600 potential water customers. Total population in the area is about 5,250 persons.

Using a figure of 65 gallons per day per person, daily use is predicted to be 341,250 gallons. Design pumping capacity will be 475,200 gallons per day utilizing a twelve-hour day and design treatment capacity will be 576,000 gallons per day. *Projected operating capacity is estimated at 59 percent of design capacity, with regard to pumping, and 72 percent of design treatment capacity.* This system, when constructed, should prove more than adequate to meet the needs of county residents.

#### Summary

Each of the three (3) existing facilities appear to be meeting the needs of those they serve and the proposed Perquimans County system also seems adequate in design. The incorporation of the Inter-County system into the County system is justifiable because of the potential to reduce administrative costs associated with the smaller system.

The existing situation in those areas of the County which do not, at present, have access to a water system is a problem in need of attention. The construction of the County system should alleviate this situation and improve health conditions in rural areas.

In addition, the linking of all water systems in the County is of importance in the event that some difficulty prevents one of the systems from operating. The excess capacity of the three existing and the one proposed system would suffice to provide for the needs of affected consumers until the system experiencing difficulty could be made functional.

In short, *water facilities can be described as more than adequate in Perquimans County when construction of the proposed County system is completed.* County residents will be provided with quality water service that is already being provided by the three existing systems.

#### Sewer Facilities

Perquimans County has only two sewer facilities, one of which is the municipal system of the Town of Hertford and the other is a much smaller *package system* found in Holiday Island. Other areas which would benefit from such systems do not have them because of the tremendous cost involved.

### Town of Hertford

The only municipal sewer system in the County is located in the Town of Hertford. The collector system consists primarily of eight inch PVC (Polyvinyl Chloride) mains and, because of the flat terrain, nine (9) lift stations are required to deliver the sewage to the treatment plant.

The plant is a contact stabilization type waste treatment facility and discharges into the Perquimans River. Water quality data collected at surveillance stations located downstream of this discharge indicates that some water quality standards contraventions have occurred which can be attributed to this facility. Assimilative capacity calculations done by the North Carolina Division of Environmental Management indicate that *if this facility maintains the minimum requirements for secondary type treatment, as defined by the United States Environmental Protection Agency, it should protect water quality in the river.*

The plant, itself, has a design capacity of 300,000 gallons per day and present loading capacity is between 190,000 and 290,000 gallons per day, depending on rain and tide. *A major problem with the facility is the seepage of water into its collectors, which contributes to the occasional overloading of the plant.*

This is being addressed in a HUD 201 study which is currently be conducted and, hopefully, some solution will be forthcoming. Until this problem has been resolved, it is

difficult to ascertain what the normal operating capacity might be. But given existing conditions, *the plant is operating at full design capacity.*

At present this facility is meeting the needs of Town residents although infiltration into collectors is ultimately causing sporadic water quality problems in the Perquimans River. For further information on the 201 study and the Hertford treatment facility, see Appendix D of this document.

#### Holiday Island (Coastland Corporation)

Holiday Island is, at present, operating a waste treatment facility with a *design capacity of 20,000 gallons per day*. This facility is an extended aeration type which discharges into Minzes Creek. Insufficient data has been gathered by the N.C. Division of Environmental Management to determine whether or not water quality standards have occurred as a result of this discharge. However, given peak load conditions in the treatment facility and pollution from other diffuse sources in Minzes Creek, such contraventions are entirely possible.

The *actual operating capacity of the facility is difficult to determine* because it is only set up to handle forty by seventy foot camper lots. During summer weekends operating capacity is high but on weekdays and during colder months, it is quite low. More detailed information on water quality standards in this area can be found in Appendix D.

At present, this facility is adequately meeting the needs of its users but has inherent difficulties due to fluctuating rates of loading. At the request of the N.C. Division of Environmental Management, the facility will be converted from a water discharge to a modified subsurface disposal facility, with a 10,000 gallon holding tank. This should serve the dual purpose of eliminating the possibility of contravening water quality standards in Minzes Creek and modifying the impact of fluctuating loading rates. More detailed information concerning this conversion is found in Appendix D.

#### Summary

Most areas of the County are not served by sewer facilities due to the high cost of construction and low population density. The two areas currently being served by such a facility are experiencing some difficulty with regard to the maintenance of water quality standards but measures are underway to remedy these problems.

### Solid Waste Disposal

At present, Perquimans County and the Towns of Hertford and Winfall are operating garbage and refuse pick-up services. Each of the three (3) utilizes the Perquimans/Chowan County Sanitary Landfill, which is located in Chowan County near the community of Cisco. The investment in equipment was shared by the two (2) counties and funded, in part, by grants from the Farmers Home Administration.

The landfill presently consists of fifteen (15) acres of land which have been leased from Union Camp and this lease will expire in three (3) years. The two (2) counties are presently using approximately five (5) acres a year and the site which is now being used should be completely filled by the beginning of 1977. Negotiations are currently underway for additional land in Chowan County.

Garbage pick-up in both Perquimans and Chowan Counties is done using two (2) front-end loading trucks, a 1975 White Easy Pack and a 1973 Ford Easy Pack. A 175 International Front-End Loader is used at the landfill site for earth-moving operations.

### Perquimans County

Perquimans County utilizes a container system of 61 garbage containers located throughout the County. Pick-up is on a regular three-times-a-week basis. These containers are placed in both the existing communities and rural areas for

County residents. During the summer vacation months when the population in many of the developments on the rivers and Albemarle Sound increases dramatically, additional containers are placed in the impacted areas to insure adequate service.

*At present, solid waste disposal in the County is adequate and functioning relatively smoothly. Providing such service in a rural area is a difficult proposition due to the dispersal of the population. Actual door-to-door pickup is economically unfeasible, but the container system appears to be working well.*

#### Town of Hertford

The Town of Hertford provides municipal garbage and refuse collection. Although the landfill site in Chowan County is used, some materials have been used for "fill" in certain low-lying areas of the Town. In the past, the Town has operated its own landfill site, but it now utilizes the Chowan site as a "county service".

Present equipment owned and used by the Town consists of two (2) garbage trucks, a 1973 Ford Back-End Loader and a 1968 Dodge Side Loader; and two (2) other trucks, a 1969 Ford flatbed and a 1967 Ford Dump Truck. Pick up is daily at each household and such materials as leaves, tree limbs and other refuse are picked up on the curb.

*The level of service being provided to Town residents is both efficient and of high quality. At present there appears*

to be no real difficulties associated with the solid waste operation.

#### Town of Winfall

The Town of Winfall operates a municipal gargage and refuse service with household pick-up twice a week. The sanitary landfill site in Chowan County is utilized for disposal and this is provided as a County service at no additional cost to the Town.

Present equipment owned and used by the Town consists of a single 1974 Chevrolet 1-ton Dump Truck. *The service being provided by the Town is adequate to meet the needs of residents.*

#### Summary

The quality and type of solid waste disposal services provided by the County and the Towns are adequate to meet local needs. *There are, given population and other constraints, no significant problems associated with present services.*



### Educational Facilities

There are three (3) grammar schools, one (1) junior high school and one (1) high school in Perquimans County. All are public schools and total enrollment in 1974-75 was 2,115. Like most northeastern coastal counties, Perquimans County has a declining school age population.

As shown in Appendix B, the "Perquimans County Land Use Survey and Results," considerable concern has been voiced by local residents with regard to existing educational facilities. The basis of this concern is apparently Perquimans County High School, where facilities are outmoded and maintenance is a problem. A study is currently underway to determine whether the structure needs to be totally or partially replaced. The facilities of the three (3) elementary schools are only 15 to 25 years old and appear to be adequate. The junior high school also seems to be in good condition both structurally and functionally.

Although educational facilities can easily be evaluated in terms of structural conditions and the provision of adequate space, it is extremely difficult to speak in terms of the quality of service being provided. Actual educational attainment of County residents is addressed in a previous section titled "Education", and post high school training opportunities available at College of the Albemarle in Elizabeth City are discussed in the section titled "Economic Projections".

It must be assumed that a "quality education" is being provided in County schools on a par with neighboring areas. *At present, the only difficulty associated with educational facilities appear to focus on the high school complex.* In all other areas the service provided can be characterized as adequate.

#### Police Protection

Police protection in Perquimans County is provided by the County Sheriff's Department and the Hertford Police Department. Existing communities and the Town of Winfall are served by the Sheriff's Department.

Dispatching operations between the two departments are coordinated to some extent. Both have separate dispatchers during the day shift (eight-to-five) but the Town dispatcher handles County calls during the remainder of the time. Both departments utilize the Tri-County Jail in Elizabeth City since they do not have permanent detention facilities.

#### Perquimans County

The Perquimans County Sheriff's Department consists of two (2) full-time officers and one (1) part-time. For a County population, excluding the Town of Hertford, of 6,500 persons; this is a ratio of approximately one officer to every 2,600 people. Obviously this is not a good situation,

although it is not at all uncommon in the region.

*Additional manpower appears to be necessary even though the County is fortunate to have a relatively low crime rate. Concern with police protection was one of the most frequently voiced concerns of local citizens in the land use survey, shown in Appendix A.*

The Department is located in the Perquimans County Courthouse with an office and several detention cells. This facility is in good condition and adequate to fit the needs of a three (3) man department.

#### Town of Hertford

The Hertford Police Department consists of five (5) full-time officers or one for every four hundred residents. This is an excellent ratio. The department is located in the municipal building; which is in excellent condition. *Both in terms of manpower and existing facilities, the department is in good condition.*

#### Summary

Police protection in the Town of Hertford is more than adequate to meet current needs, but there is some question concerning the need for increased manpower in the Sheriffs Department. As stated by local citizens in the Perquimans County Statement of Objectives, Policies and Standards, the

economic feasibility of placing a sheriff's deputy in each township should be closely examined.

### Fire and Rescue Services

#### Fire Protection

Fire protection in Perquimans County is provided on a "volunteer" basis. There are presently five (5) volunteer fire departments located in or near the Towns of Hertford and Winfall, and the communities of Woodville, Bethel and Belvidere. Of the five (5) townships in the County, only New Hope Township is without a volunteer fire department. The departments located in Hertford and Woodville (Inter-County Volunteer Fire Department) respond to calls in the Township.

The largest department in the County, with regard to both men and equipment is the Hertford Volunteer Fire Department. The department has a complement of twenty-five (25) men and and 8-A rating from the North Carolina Fire Insurance Bureau. All fire departments in the County except the Bethel Volunteer Fire Department have been rated and have received 8-A classifications. This rating is considered good for an all-volunteer department.

Hertford volunteer firemen man both Town and County equipment and respond in areas of the County not covered by existing departments. They also provide back-up support to the other departments in the event of a major fire.

Dispatching for the five (5) departments is done on an individual basis. Each department is reached by calling a different phone number and the firemen are alerted by a system of radio-controlled sirens. Individual monitors and radio equipment are on all fire vehicles. There is presently no central dispatching facility to assist in coordination.

*The structures in which fire fighting vehicles and equipment are housed appear to be in good condition, with the exception of the Hertford Volunteer Fire Department. Plans are underway to remedy this situation, however, and once a new facility is constructed in Hertford, all structures should be adequate.*

#### Rescue Service.

The Perquimans County Rescue Squad is an all-volunteer organization of approximately seventy-six persons who provide rescue and ambulance services to County residents. It is located in the rear of the Perquimans County Office Building which is structurally adequate to meet the needs of the squad.

Dispatching for the rescue squad is handled by two different sources, one during regular business hours and another during the remainder of the time. Local citizens in need of the service must be aware of the two numbers and know which one to call during certain hours. Obviously this represents a potential problem.

### Summary

The quality of fire protection and rescue service in Perquimans County, as well as the structural condition of most facilities, are good on the whole. Only the Hertford Volunteer Fire Department is in need of a new building.

*The most potentially dangerous situation which exists is the lack of a centrally located dispatching facility to handle fire and rescue calls. The present system is disjointed and makes it almost impossible to coordinate the actions of two or more fire departments and the rescue squad. The organization of an emergency operating center with trained dispatchers capable of making control decisions, with regard to the type of response necessary in each emergency, should be considered. Local citizens should have a single phone number to call in the event of an emergency instead of the existing assortment of numbers.*

### Transportation

#### Primary Roads

There are only two (2) primary roads in Perquimans County, Highways 17 and 37. *Although most roads in the County appear to be underutilized according to 1974 traffic flow diagrams provided by the North Carolina Department of Transportation and Highway Safety, Highway 17 is being used beyond*

*design capacity in summer months.* This highway links piedmont North Carolina with Outer Banks beaches and has a tremendous number of tourists and vacationers traveling through the portion in the County.

#### Secondary Roads

Although most secondary roads in the County are paved and are state maintained, *a significant problem exists with unpaved roads.* Many of these roads are of sufficient quality to be paved and are, in fact, already state maintained. The decision with regard to paving is the responsibility of the North Carolina Secondary Roads Council and is not subject to direct local control.

Others roads which are not already on the state system are subject to fairly stringent standards passed by the General Assembly in 1975. Before these roads can be accepted for maintenance by the state, these standards must be met. A significant number of roads in subdivisions cannot meet these criteria and the problem is difficult to deal with. County subdivision regulations do not require that all new roads meet state requirements, and the County does not pave roads itself.

#### Summary

At present, problems exist with summer traffic on High-

way 17 and with unpaved roads in the County. Of the two (2), *the problem of most concern to local residents is unpaved roads.* Action should be initiated in the form of petitions to the Secondary Roads Council and strengthened subdivision regulations to deal with this concern.

#### Recreational Facilities

Public recreation facilities in Perquimans County consist of six (6) sites comprising a total of approximately three (3) acres. Each of the six sites is a water access area with the primary recreational emphasis on boating.

Table 14

#### PUBLIC RECREATION SITES IN PERQUIMANS COUNTY

<u>Name</u>	<u>Size (in acres)</u>	<u>Type of Land</u>
Bethel Fishing Center	1.0	developed
Dick Drive-In	0.3	developed
Town of Hertford Boat Launch	0.5	developed
White Hat Landing	0.3	grassland
New Hope Boat Launch (Wildlife Commission)	0.3	developed
Snug Harbor Marina	0.6	developed

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Source: Recreation Division, Department of Natural and Economic Resources

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There are presently no facilities such as parks, swimming areas and playgrounds open to the public. The need for such facilities is documented in the Perquimans County Land Use Survey, shown in Appendix A. *An overwhelming number of*



residents indicated that the lack of such facilities in one of the most important problems in the County. Other than boating access areas, no public recreation facilities are available and this fact constitutes a problem that is in need of attention.

## EXISTING PLANS, POLICIES AND REGULATIONS

### Perquimans County

In the past, Perquimans County has not involved itself in the planning process. *There is no County-wide land use plan in effect and no zoning ordinances have been adopted.* The only plan that has been undertaken is the "Perquimans County Overall Economic Development Plan" which was written in 1971. Many of the issues addressed in that Plan are still relevant to the existing economic situation.

*The only other planning activity undertaken on a County-wide level was the adoption of subdivision regulations in 1973.* The County is presently reviewing all subdivision plats under these regulations and is attempting to enforce its provisions.

Although the County used the North Carolina Model Subdivision Regulations as a guide, a professional planner was not consulted when the regulations were written. This fact and subsequent changes in state law have combined to make basic revisions necessary.

*Perquimans County is not presently involved in either building or housing code enforcement,* although new construction does require a permit for tax purposes. The County is also not enforcing floodplain regulations but has written a letter of intent in order to meet the criteria for acceptance into the emergency program set up by the Flood Disaster Pro-

tection Act of 1973. Funds have been requested from the United States Department of Housing and Urban Development under the 701 Planning Assistance Program to write a comprehensive set of floodplain regulations for the County during the next fiscal year.

#### Town of Hertford

*The Town of Hertford has been involved in the planning process since 1965 when its Master Plan was adopted. This plan contains a summary of economic trends, a neighborhood analysis, a land use survey and analysis and the actual land development plan.*

*In 1967 the Town adopted a Public Improvements Program to guide expenditures in the public service area. The recommendations set forth in this document have only been partially implemented, as is the case with the land development plan. The growth factor has not provided the necessary incentive for the expenditure of Town funds in many of the recommended areas. Most of the policies and goals established in these two (2) documents are still applicable to existing conditions and have been incorporated into current planning efforts.*

*The Town also has adopted both zoning ordinances and subdivision regulations in an effort to control development. Although the zoning ordinances are being enforced to some degree, the subdivision regulations are not. The Town does not*

have any sort of zoning officer due to its size and limited fiscal resources.

Both the zoning ordinances and subdivision regulations are in need of revision in order to update several areas. Changes in state law more than changing public opinion or economic trends are responsible for the needed changes.

*The Town does not, at present, have or enforce either housing or building codes. It is not involved in the federal floodplain insurance program but will come under the regulations to be adopted by the County in the near future. Housing and building codes are not in effect, again, due to the size of the Town and its limited fiscal resources.*

#### Town of Winfall

The Town of Winfall has not adopted any plans, policies or regulations dealing with land use. In this area, the Town comes under the jurisdiction of County planning efforts.

#### Summary

Planning efforts and land use controls adopted by the County and the Town, although inadequate in some respects, have largely served the needs of the people. *There has not been a tremendous pressure for development or a demand from local citizens for such controls.* Given local financial resources and the lack of development pressure, both the County

and the Town have done an adequate job.

As previously discussed in other sections, however, *development pressure has started to increase and local public opinion favors tighter controls than are currently in effect.* Areas in the immediate vicinity of the Town of Hertford, and in the southern part of the County will be experiencing growth over the next several decades and steps to insure that it is planned need to be implemented.

## SUMMARY OF PUBLIC PARTICIPATION

### Perquimans County

*The public participation effort in Perquimans County was organized by the Citizen's Advisory Committee, a group of eight (8) local residents appointed by the County Commission. Representation on the Committee consists of a single member from each of the five townships, one (1) from the Town of Winfall and two (2) from the Town of Hertford.*

This committee was responsible for scheduling community meetings and presentations to local organizations to discuss coastal management and its county-wide implications. In addition, the Committee wrote and distributed a land use questionnaire to local residents and property owners. Response to this survey was quite good with a rate of better than twenty-five percent of all questionnaires returned. A copy of the actual questionnaire, the results and the cover letter can be found in Appendix A of this document.

After the final tabulation of the results of the survey, several issues of county-wide significance emerged. These issues, as well as the actual survey results, were discussed in community meetings in each of the five townships in order to more precisely determine citizen preferences and future desires with regard to land use. For a more precise and detailed discussion of those meetings and the public participation effort, in general, the report of the Citizen Advisory Committee to the Perquimans County Commission is found in

## Appendix B.

Utilizing public input from the land use survey and public meetings, the Citizen Advisory Committee formulated and adopted a preliminary Statement of Objectives, Policies and Standards. This statement was presented to the Perquimans County Planning Board, and was used by the Board to formulate the initial Perquimans County Land Use Plan; with the exception of the parts of the plan dealing with the Town of Hertford. Subsequent revisions in both the Plan and the Statement occurred in Planning Board/County Commission conferences, with the final document being the product of those meetings.

### Town of Hertford

Public participation in the Town of Hertford was not organized in the same manner as in the County because of the duplication of effort which would have been involved. *The Town Council chose not to appoint a Citizen Advisory Committee but, rather, to rely on the efforts of members of the Town Planning Board and the three (3) members of the Perquimans County Citizen Advisory Committee from Hertford Township.* Two of the three Committee members reside within present town limits with the third member residing outside those limits.

All meetings held in the Town dealt with both County and Town planning efforts, and the County-Wide Land Use Survey was coded to enable a tabulation of results for Hertford Township.

Those results are found in Appendix A.

Utilizing public input from the land use survey and public meetings, the two groups working together adopted a Statement of Objectives, Policies and Standards which was used by the Town Planning Board in preparing the initial segments of the Perquimans County Land Use Plan pertaining to the Town of Hertford. Subsequent revisions in both the Plan and the Statement occurred in Planning Board/Town Council conferences; with the final document being the product of those meetings.

#### Town of Winfall

*Public participation in the Town of Winfall was organized as a part of the County effort by the member of the Citizen Advisory Committee from the Town. Given existing population, elected town officials chose to let the County plan for Winfall as a part of the County Plan. All public participation was structured to fall within the organizational framework set up by the Perquimans County Citizen Advisory Committee.*



## LAND USE OBJECTIVES, POLICIES AND STANDARDS

*The basis of any successful land use plan must be the articulated desires of local people. The future of the area being planned for belongs to local residents and their children; and it is these residents who must make land use decisions.*

With these facts in mind, Statements of Objectives, Policies and Standards have been assembled for Perquimans County and the Town of Hertford. As previously stated in the section on public participation, they were drawn from land use survey results as well as local meetings with groups and concerned private citizens. They attempt to state as clearly as possible what most county and town residents have said they would like to see happen to Perquimans County and the Town of Hertford in the future. *These Statements are central to the Plan.* All land use recommendations stem either directly or indirectly from these stated objectives, policies and standards.

Complete Statements of Objectives, Policies and Standards for both Perquimans County and the Town of Hertford appear on the following pages. In many ways they are the most important parts of this land use plan. They outline the direction in which local people have stated they would like to see the County and the Town proceed. They serve as guides for future development and the foundation upon which the planning process rests.

PERQUIMANS COUNTY STATEMENT OF  
LAND USE OBJECTIVES, POLICIES AND STANDARDS

Objective

- I. *The future growth and development of Perquimans County must be planned and orderly. To help insure this, we recommend:*

Policies

1. The adoption of a County Land Use Plan to be used as a guide for future growth and development.
2. The adoption of a comprehensive set of zoning ordinances to implement the provisions of the land use plan.
3. The strengthening of existing subdivision regulations in order to insure stable communities and sound community development.
4. The adoption of a set of building codes to protect the potential homeowner and insure a minimum quality of construction throughout the County.
5. The adoption of a comprehensive set of mobile home ordinances.
6. The strict enforcement of such zoning ordinances, subdivision regulations, mobile home ordinances and building codes as have been and will be enacted.
7. The creation of a Board of Adjustment, comprised of members appointed by the County Commissioners, to whom individuals or groups may petition for specific exceptions to existing zoning ordinances.

Standards

1. The County in conjunction with the towns and/or neighboring counties should explore the possibility of acquiring a building inspector.

Objective

- II. *The County should, in conjunction with the towns and*

*the Chamber of Commerce, actively seek industry and jobs. However, it must be recognized that the natural environment and scenic beauty of the County, and the life-style of its residents are of utmost importance and must be preserved. Industry which would threaten the natural environment of the county or the way-of-life of its citizens should be discouraged from locating within the County. Therefore we recommend that:*

#### Policies

1. The County government should work closely with the towns and the Chamber of Commerce in actively seeking small, attractive technical industries with particular attention to those that do not impose any strain on the local environment or life-style, and which utilize agricultural and forest products.
2. The future industrial growth should be concentrated in or near existing communities, protecting prime agricultural land and the essentially rural character of the County.
3. The County should actively discourage the location of new industry along the County's rivers through zoning ordinances or whatever vehicle deemed most effective in this effort.
4. The County, in conjunction with the towns and the Chamber of Commerce, should immediately review the possibilities for encouraging the development of public recreation facilities on the Perquimans, Little and Yeopim Rivers, including such activities as boating, sport fishing, swimming, picnicking, camping and others.
5. The County, in conjunction with the towns, the Chamber of Commerce and the Restoration Association, should actively explore the possibility of attracting tourists by restoring where feasible and maintaining where necessary the historic sites and homes which are our heritage.

III. *The County, in cooperation with the Town, should adopt and implement a policy of community development, beautification, and should be made to alleviate problem areas in the County which currently exist or may come into existence at a later date. Therefore we recommend that:*

### Policies

1. The County should adopt a policy to encourage state and federal assistance in community development and public works projects, with particular emphasis on erosion control assistance for land bordering the Albemarle Sound and the County's rivers.
2. The County should adopt a plan for county beautification and development of recreation potential, including parks, swimming areas and playgrounds.
3. The County should encourage and support detailed long-range studies of water quality including possible sources of whatever pollutants might be found in the actual analysis of water samples taken from the County's rivers.
4. The County should encourage and support detailed long-range studies of fish and wildlife populations, including pressures on such populations.
5. The County should coordinate all construction of future water and sewer lines with whatever land use plan is in effect at the time and should attempt to provide as many county residents with these services as is economically feasible.
6. The County should plan for the construction of educational facilities in accordance with available population projections and the overall development plan to be adopted. All effort should be made to strengthen the existing system where feasible.
7. The County should plan for the provision of police and fire protection in accordance with available population projections and the overall development plan to be adopted. These services must be as modern and professional as possible within monetary limitations.
8. The County, in conjunction with the Towns, should continue efforts to attract enough doctors and dentists to provide adequate health care for the county's citizens.
9. A realistic study and appraisal of the County's tax base must be undertaken in order to determine what sources of funding are available to provide for increased public services.

### Standards

1. The County should seek the services of a professional administrator to coordinate governmental activities and explore new sources of funds for county improvement. It would be the responsibility of this administrator to seek federal and state aid for public works projects, coordinate the activities of various groups working for civic improvement within the County and work with citizens and elected officials to make the County a better place in which to live.
2. The County should attempt to place a deputy sheriff in every township as soon as it becomes economically feasible.
3. Committees should be formed in such areas as recreation, historical preservation and public services to make recommendations to the County Commissioners for action in these areas.

TOWN OF HERTFORD STATEMENT OF  
OBJECTIVES, POLICIES AND STANDARDS

Objective

- I. *The future growth and development of the Town of Hertford must be planned to obtain efficiency, order and beauty in the Town. To this end it is our recommendation that the existing Master Plan be revised and updated in order to serve as a guide for all future growth and development.*

Policies

1. Land uses must be designed to be compatible rather than in conflict.
2. Land uses must reflect future growth projections and the most publicly beneficial use to which the land can be put.
3. The basic character of the Town and the life-style of its residents must be preserved as much as possible.
4. Historic areas properties must be maintained and preserved as much as possible.
5. Natural scenic areas must be retained in the Town where possible.
6. Vacant areas within present Town limits should be developed if at all possible.
7. The Town should, in the future, actively pursue a policy of annexation in those areas adjacent or contiguous to Town boundaries, as such areas become urbanized and would benefit from the provision of municipal services.

Standards

1. Subdivision regulations, zoning ordinances and building codes must be enforced.
2. A fire prevention code should be adopted by the Town Council and enforced by the fire chief or his designated representative.
3. The services of an inspection officer should be

obtained and this office should carry with it the power of enforcement.

4. The provision of ample space for public facilities must be planned for.
5. Parking facilities downtown must be preserved and expanded if possible.
6. Public restrooms should be provided in the downtown area.
7. Particular attention, with regard to annexation, should be focused on the present extraterritorial limit of the Town as this area becomes urbanized and would benefit from the provision of municipal services.

#### Objective

- II. *The residential areas of the Town must be preserved and future areas must be planned to provide a safe, wholesome environment for a full family life. To achieve this objective we recommend that:*

#### Policies

1. Residential areas must be maintained by the application of good zoning controls.
2. Subdivision regulations should serve to insure that any new residential developments will be properly planned neighborhoods and reflect the needs of future residents.
3. The indication of desirable sites for future residential growth must be incorporated into the new Master Plan.
4. Heavy traffic and business activities are to be discouraged in residential areas through the application of zoning ordinances, subdivision regulations and sound traffic engineering practices.

#### Standards

1. Residential streets must not become excessively long.
2. The use of loop and cul-de-sac streets should be

encouraged in order to maintain privacy and safety.

3. Areas for recreation should be provided in each neighborhood.
4. Fire breaks should be maintained between homes.
5. Periodic building inspection in areas of substandard housing should be undertaken and those structures which constitute a public hazard should be renovated or demolished.
6. The location of flammable chemicals, gases and other hazardous substances within the Town should be regulated and future location prohibited.

#### Objective

- III. *The Town should work closely with the County and the Chamber of Commerce in actively seeking industry and jobs for the area.* Particular attention should be paid to those industries which do not impose any strain on the local environment or life style.

#### Policies

1. Those areas which are most suitable for industrial growth should be indicated as such on the Master Plan and appropriately zoned.
2. Industrial development along the Perquimans River, especially with regard to polluting industry, should be prohibited through the use of zoning controls.
3. A variety of commercial and industrial zoning districts should be used to cover various commercial activities.

#### Standards

1. Sufficient water and sewer capacities should be available to prospective industries.
2. Land options, development rights or land, itself, should be purchased or obtained in choice areas for industrial development.
3. Restrictive zoning should be used ahead of development to retain land for industrial use.



### Objective

- IV. *The Town should adopt and implement a policy of community development, beautification and citizen involvement in the decision-making process. Attempts should be made to alleviate problem areas in the Town which currently exist or may come into existence at a later date.*

### Policies

1. The potential for recreation should be developed both for Town and County residents.
2. Natural areas and scenic outlooks along the Perquimans River should be protected from development.
3. The Town, in conjunction with the Chamber of Commerce and the Restoration Association, should actively explore the possibility of attracting tourists and the tourist dollar by restoring where feasible and maintaining where necessary the Town's historic sites and homes.
4. The solution to existing substandard housing problems should be addressed by local government with federal and state assistance when possible.

### Standards

1. A combination park containing tourist facilities for overnight campers and a picnic area for tourists and local residents should be developed.
2. A tourist center should be located in the Town to provide information as to the description and location of historic sites and recreation facilities.
3. A Town recreational facility should be constructed as soon as it becomes financially possible in order to provide a place for both youth and adults to enjoy recreational activities.
4. Suitable land should be provided for public boating facilities and scenic outlooks.
5. An area for boating activities should be designated providing for boat repair, sales and storage.
6. A historical district should be designated on the

Southside of the Town and promotional campaigns organized to spur tourism.

7. Existing substandard housing in the Town should be renovated where possible and feasible, cleared where impossible or infeasible.

## DESCRIPTION OF PROJECTED CONDITIONS

### Population Projections

#### Perquimans County

According to population estimates provided by the North Carolina Department of Administration, Perquimans County is expected to have between 7,600 and 9,400 persons by the year 2000. Based on such variables as birth rates, death rates, migratory trends and economic forecasts, *these two projections represent the upper and lower bounds of the expected population.* Detailed figures are given below in Table 15.

Table 15

#### Projected Population for Perquimans County

	<u>1980</u>	<u>1990</u>	<u>2000</u>
High	8,500	9,000	9,400
Low	7,500	7,500	7,600

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Source: North Carolina Department of Administration

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Public input and local opinion would seem to favor the "high" estimate as opposed to the lower figure. In the Land Use Survey distributed to county residents by the Citizens Advisory Committee, 18.7 percent of all respondents stated that they would like the population to remain the same size while 3.0 percent wanted it to decrease. The overwhelming majority, 78.3 percent, were in favor of a small-to-substantial increase. (For more precise information see Appendix

A of this document). *It is clear that the majority of local citizens favor growth and, for this reason, the "high" figure has been used for planning purposes.*

#### Town of Hertford

Although precise population estimates for the Town of Hertford are not available, they are available for Hertford Township in which the Town is located. According to 1970 Census figures, there were 2,763 residents of the Township, of which 2,009 were Town residents. The projected figure for the year 2000 is 3,290 persons in Hertford Township. Obviously, most of those will be Town residents. Detailed figures are given below in Table 16.

Table 16

#### Projected Population For Hertford Township

<u>1980</u>	<u>1990</u>	<u>2000</u>
2,900	3,110	3,290

Source: North Carolina Department of Administration

*The Town of Hertford can be expected to experience moderate growth in the next twenty-five years. This corresponds with the stated desires of the people in the Land Use Survey. For more precise information see Appendix A of this document.*

## ECONOMIC PROJECTIONS

### Perquimans County

*In the next twenty-five years Perquimans County is expected to remain agriculturally-oriented. The present economic cycle in which the County finds itself poses somewhat of a problem with regard to future industrial growth. As agricultural operations become more mechanized, fewer farm workers are needed. Small farmers are increasingly unable to afford the necessary machinery and are forced to sell their land and seek another type of employment. The farm population, as a result, has been decreasing steadily while the number of entrants into the nonagricultural work force is increasing.*

*Although this trend, in itself, does not constitute a problem; when combined with the fact that the County lacks an urban center to serve as a potential area of employment, difficulties arise. Since job opportunities are not abundant in the County, residents are forced to seek work in neighboring areas or leave the County entirely.*

*It has been demonstrated previously that a large percentage of the work force commutes daily to neighboring counties and the Norfolk, Virginia Area. It has also been shown that the percentage of young, working-age adults in the County population is much lower than it should be; indicating that many people have chosen to leave the County in search of employment opportunity. Both of these are essentially*

"negative" economic indicators. The County does not have a skilled work force upon which new industries could expect to draw.

Training opportunities are provided by the College of the Albemarle in Elizabeth City. The College offers two-year technical and one-year vocational programs. These appear in Table 17 on this page. There are no programs offered in the County of a job-related significance; nor are there any extensive programs in either Chowan or Gates counties. Other than those programs offered in Elizabeth City, local classes are of the "adult education" variety.

Table 17

Training Opportunities at College of the Albemarle

1975

Technical Programs (2-Year)

Business Administration  
Drafting and Design Technology  
Electronics Technology  
General Office Technology  
Secretarial Science  
Medical Secretary Program  
Nursing (Associate Degree)

Vocation Programs (1-Year)

Automotive Mechanics  
Cosmotology  
Machinist Trade Program  
Practical Nursing

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Source: College of the Albemarle

---

Although these trends pose problems for industrial development, there are other more positive factors which

are also important. *Perquimans County and the Town of Hertford have obtained options on choice land for an industrial park and are in the process of organizing a group of citizens to provide prospective industries with the information they require.* This group will operate under the auspices of the Perquimans County Chamber of Commerce. It will require this type of organized effort on the part of the County, if it is to attract industry other than the low-skill, low-wage variety.

It must also be stated, however, that the location of new industries in the County is not necessarily a direct reflection of the ability of local citizens and officials to attract them. National economic trends and other factors play an important role. At present, few industries are expanding or relocating. This makes the problem even more complex. If present economic trends continue, it will be quite difficult for the County to attract the type of industry that would be beneficial to the local economy.

Although it is possible and even probable that Perquimans County will attract several medium-to-small industries in the next twenty-five years, the local economy should remain centered around agriculture and forestry. This situation is not necessarily unfavorable, however. Existing evidence indicates that the decline in farm population has slowed and may begin to stabilize in the future. Agriculture,

itself, is increasingly becoming "agribusiness" with its own array of supportive services.

*Certainly, with respect to the existing and projected world food situation, agriculture will be the most stable and the most important industry in the world. Demand for agricultural products from Perquimans County can only increase, insulating the industry from national and international economic fluctuations. The decrease in the number of persons forced off farms, which now seems to be occurring, will mean less pressure on nonagricultural economic sectors to provide jobs lost in the agricultural sector.*

*In addition, great potential exists to develop major recreational attractions in the County and preserve existing ones. The increasing population of both the state and the nation will place more and more demand on prime water sports and wildlife hunting areas. With proper planning and management of natural resources, a healthy injection of tourist dollars could stimulate the local economy.*

*Also of potential importance with regard to tourism are the many historic sites and properties in the County. Proper preservation and restoration, coupled with promotional campaigns, could possibly attract a large number of tourists annually. Certainly the potential exists in terms of both historic sites and current tourist traffic patterns.*

*A final area of potential importance is that of retire-*



*ment housing.* Current trends indicate that a significant number of people are retiring in the County from other areas, primarily Tidewater Virginia. The pleasant surroundings and the relaxed pace of life make the County a desirable place to spend retirement years. If high quality development occurs in the southern portion of the County along the rivers and the Albemarle Sound, the influx of retired persons will certainly increase.

This would be beneficial to the local economy because the income of those persons would not come from a source within the County. The dollars injected into the local economy would be *new money*. This would stimulate the growth of businesses and services within the County and provide additional jobs for local residents.

#### Perquimans County: Summary

Although some industrial growth is needed to diversify the economic base of the County, it is doubtful that most residents would approve of a major industrialization of the County. It is even less likely that such a transition could occur in the next twenty-five years without dramatic changes in technology. In all likelihood, Perquimans County will remain primarily rural and agriculturally-oriented for at least the next twenty-five years. Whether or not recreational and historic attractions are developed is largely up

to elected officials and concerned citizens.

Given that some effort will be made in those areas, the economy should experience some diversification and industrialization. Tourism and the number of retirement-age new residents should increase slightly, and the number and type of businesses should reflect these changes. *Overall, however, the economy of the County should not undergo any dramatic transformations. The economic picture should improve perceptively but slowly.*

#### Town of Hertford

As previously stated, the Town of Hertford is the commercial center for Perquimans County and is dependent on the state of its economy. *In the next twenty-five years, both residential and commercial activity should increase in the Town as the County population increases.* This increased population should, in turn, make it possible for several types of retail establishments not currently found in the Town or County to come into existence, attracting residents of the county currently shopping elsewhere.

Gross retail sales *could* increase more than proportionally as county residents that presently shop in neighboring cities begin to use the Town instead. Obviously it is extremely difficult to measure or predict such an impact, but it can be logically presumed to occur at some point in the

future. As the economy of the County slowly diversifies and improves, so should that of the Town. Many of the types of services that cannot be supported by the existing Town and County population should locate in Hertford as the population increases.

## PROJECTED PUBLIC FACILITIES DEMAND

One of the most important areas of local governmental expenditure is that of acquiring and maintaining necessary public facilities. Because of the tremendous cost of such things as firefighting and street cleaning vehicles, water and sewer systems, and other capital facilities, it is essential that these items are properly planned for in the local government budget. In many cases it is necessary for special accounts to be used in order to accumulate the necessary funds for a specific improvement over several years. Other capital investments are too large to be assumed by local government alone and require state or federal assistance.

*It is important to anticipate what types of facilities will be required in the future to support the needs of the projected population. This section attempts to deal with public facilities over a ten year period in order to plan for the growth anticipated within the County.*

### Water Facilities

At present, only those persons residing in or quite near the Towns of Winfall, Hertford and the community of Woodville have access to a public water system. Construction will begin shortly, however, on a new Countywide Water System to serve other County residents.

*During the ten-year planning period it is estimated that*

each of the four (4) facilities will be adequate to serve the needs of its customers. The proposed Countywide Water System will be designed to link up with the other systems in the County in order to increase the "flexibility" of each system. In the event of some unforeseen difficulty which could render a well or treatment facility inoperable, the effected system could purchase water from another or other systems until the problem is remedied. This aspect is extremely important since both the Hertford and Winfall Systems are only operating at about fifty percent of capacity.

The Inter-County System is operating at approximately thirty percent of capacity and current plans call for it to become an integral part of the proposed Countywide System. This will further reduce the estimated seventy-two percent of design capacity at which the Countywide System will be operating. Given projected growth figures, the water systems in the County should provide adequate and high quality service to County residents once the proposed system has been constructed.

#### Sewer Facilities

There are, at present, only two (2) sewage treatment facilities in Perquimans County, the municipal system of the Town of Hertford and a much smaller package facility found in Holiday Island servicing camper lots. The Town of Winfall has, in the past, given the question of constructing a municipal facility

careful consideration but found the undertaking to be beyond the financial capability of the Town.

#### Town of Hertford

As stated in detail in Appendix D, "Water Quality in Perquimans County", the Town facility is suffering from groundwater infiltration into its collectors. This results in an occasional overloading of the treatment plant and sporadic water quality problems in the Perquimans River.

The system is currently operating at approximately full design capacity. *This indicates that the capacity of the system will need to be expanded significantly over the ten year planning period if it is to meet the needs of new residents and businesses.*

The municipal system serves not only Town residents and businesses, but also has extended lines to the industrial park site outside Town limits. The provision of adequate sewer service to the site is of extreme importance in attempting to attract industry. So an increased treatment capacity is necessary not only to provide Town residents with adequate service while protecting water quality in the river, but also to aid the County as a whole in its industrial expansion program.

At present, the Town system is being examined in a federally-funded study which will determine the extent of the infiltration problem and methods of remedying the condition. Quite

possibly the operating capacity can be reduced enough to postpone the expansion of design capacity, which would be a costly undertaking. In this manner, municipal needs over the ten year planning period could be met.

It is apparent, however, that *future industrial needs generated from the park will be difficult to meet* especially if the industry or industries locating there are primary water users. In such a case, the new industry or industries would be forced to construct their own facility. This is not an unusual situation but it is one that should be noted by those involved in the industrial expansion program.

The 1972 Water Pollution Control Amendments require pretreatment of all industrial wastes before they can be discharged into a public waste treatment system. Any new industry generating such wastes would be forced, by law, to construct its own pretreatment facilities but would retain the option of either constructing an entire system or partially utilizing a local public system. For this to be a viable option in the industrial park, however, the Town of Hertford will be forced to expand its treatment facilities.

#### Holiday Island

As discussed in detail in Appendix D, "Water Quality in Perquimans County", the Holiday Island package system is designed to serve the needs of weekend campers. *As it presently*

*exists, it will not be adequate to serve the needs of increased numbers of campers over the ten year planning period. However, with the modifications suggested by the North Carolina Division of Environmental Management, the facility can be upgraded and its weekend capacity increased substantially.*

All indications are that the suggested modifications will be constructed and the possible threat to water quality eliminated. When this occurs, the system should be more than adequate to provide for the needs of its users over the planning period.

#### Solid Waste Disposal

At present, both Perquimans County and the Towns of Hertford and Winfall operate refuse pick-up services. Each of the three (3) utilize the Perquimans/Chowan County Sanitary Landfill. *During the ten year planning period, all equipment will need to be replaced and more land will have to be obtained for fill purposes.* The need for more land is immediate but the garbage trucks and earth-moving equipment utilized jointly by Perquimans and Chowan Counties are relatively new and will not need to be replaced until the later half of the planning period.

The Town of Hertford will have two (2) garbage trucks to replace in the last half of the planning period and a dump truck and flatbed truck which will need replacement during the first half. The Town of Winfall has only one vehicle assigned to garbage pick-up and it will need replacement in the second



half of the planning period.

*On the whole, solid waste disposal services are in satisfactory condition.* Replacement of vehicles during the ten year planning period is standard and negotiations are presently underway to obtain more land for fill operations. If these negotiations are successful and the necessary vehicles replaced, refuse pick-up should be adequate over the next ten years.

#### Educational Facilities

*The only educational facility which will not prove adequate over the planning period appears to be Perquimans County High School.* The building is old and outmoded, and maintenance has become a problem.

A private consulting firm was retained by the Perquimans County Board of Education to study the existing situation and provide them with alternatives. The results of this study have been presented to the County Commission and some sort of decision will be reached in the immediate future. Hopefully, the resulting renovation can begin in the next several years and the complex can be made functional again. When this work is completed, the high school should prove adequate to meet the needs of its students over the remainder of the ten year period. The other educational structures in the County appear to be adequate at present and should remain so over the planning period. The projected school-age population in the Coun-

ty should not increase at a rate which would necessitate any new construction, other than that associated with Perquimans County High School.

#### Police Protection

Police protection in Perquimans County is provided by the Sheriff's Department with the Hertford Police Department providing the same service within Town limits. The Sheriff's office is located in the County Courthouse and the Hertford Police Department is in the Hertford Municipal Building. *Both structures are adequate to meet the basic needs of the respective law enforcement agencies and should remain so during the ten year planning period.*

Neither department has permanent detention facilities but rather utilize the Tri-County Jail in Elizabeth City. This arrangement is economically beneficial to both Town and County departments and should prove adequate during the planning period. *Temporary* detention facilities are located in the County Courthouse and are used until prisoners can be transported to the Tri-County Jail.

*Equipment which must be replaced during the planning period includes all automobiles and other items of limited durability.* Although not extremely large capital expenditures, the replacement of this equipment should be planned on a regular basis in order to assure adequate public service. This is

standard practice in both the Town and County and does not represent any departure from current budgetary practice.

*In terms of actual physical facilities, both departments are well-situated and do not face any major capital outlays during the planning period. The only potentially significant fiscal expenditure which might occur in the next ten years deals with a manpower increase in the Sheriff's Department. Citizens have indicated that they would like to have a deputy in each township when it becomes economically possible. This would mean not only increased personnel costs but also increased equipment and operating costs.*

#### Fire and Rescue Services

##### Fire Services

Fire protection in the County is provided on an all-volunteer basis with departments located in the Towns of Hertford and Winfall, and the communities of Woodville, Bethel and Belvidere. *Of the five (5), only the Hertford Fire Department will need to replace the building in which it is housed during the ten year planning period.*

The Hertford Town Council is currently studying the situation and has come up with several alternatives. Once this problem has been rectified, all buildings in the County housing firefighting equipment will be structurally sound

enough to meet the needs of the respective departments.

A complete listing of firefighting vehicles by department is provided below. A twenty (20) year replacement date has been used as a guide for the purchase of new equipment. This date applies to all vehicles except tankers which have a longer life expectancy than other firefighting vehicles.

Hertford VFD Equipment

1975

<u>Age and Type of Equipment</u>	<u>20-year replacement date</u>
1-1962 Howe 750 GPM Pumper (500 gal. tank)	1982
1-1971 Howe 750 GMP Pumper (700 gal. tank)	1991
1-1963 1200 Gallon Ford Tanker	N/A
1-1940 American La France Pumper (Reserve)	1960

Winfall VFD Equipment

<u>Age and Type of Equipment</u>	<u>20-year replacement date</u>
1-1973 John Bean 750 GPM Pumper (500 gal.)	1993
1-1959 Ford Chrysler Aux. Pumper 500 GPM	1979

Belvidere-Chappell Hill VFD Equipment

<u>Age and Type of Equipment</u>	<u>20-year replacement date</u>
1-1971 Chev. Daley 350 GPM Pumper (300 gal.)	1991
1-1975 John Bean 750 GPM Pumper (500 gal.)	1995
1-1963 Dodge tanker 1000 gal.	N/A
1-1951 Auto Car 3000 gal. tanker (Reserve)	N/A

### Inter-County VFD Equipment

<u>Age and Type of Equipment</u>	<u>20-year replacement date</u>
1-1971 Am La France 750 GPM Pumper (500 gal.)	1991
1-1964 Int. Tanker 350 GPM	N/A
1-1952 Ford 500 GPM Pumper (Reserve Unit)	1972

### Bethel-Community VFD Equipment

<u>Age and Type of Equipment</u>	<u>20-year replacement date</u>
1-1974 Chev. Atlas 1200 gal. tanker	N/A
1-1951 Ford 500 GPM Pumper (Reserve)	1971

As noted above, some of the firefighting vehicles currently in use are outdated and in need of replacement. Others will need replacement during the planning period. *On the whole, however, the fire departments are in good condition with regard to facilities and equipment.* The level of service that is currently being provided should remain adequate throughout the next ten years given the replacement of outdated vehicles.

### Rescue Service

The Perquimans County Rescue Squad is an all-volunteer organization which provides ambulance and rescue service to County residents. The structure in which the vehicles are housed should prove adequate over the ten year planning period.

Present equipment consists of a 1969 Pontiac Ambulance

and a 1973 Chevrolet Van Ambulance. A 1975 Chevrolet Modular Ambulance has been ordered. During the planning period, the 1969 Pontiac and possibly the 1973 Chevrolet will need to be replaced. *On the whole, however, the Rescue Squad should be able to provide adequate service given the replacement of the two (2) ambulances.*

### Transportation

The issue of primary and secondary roads in the County is a difficult one to deal with since these roads are state maintained. Highway 17 appears to be in need of widening into four lanes to accommodate the heavy flow of tourist traffic during the warmer months but whether or not it will be done is a state decision. In all likelihood, traffic flow on Highway 17 will increase during the planning period making it even more important to expand its capacity.

Secondary roads in Perquimans County appear to be underutilized according to 1974 traffic flow diagrams provided by the North Carolina Department of Transportation. A problem exists, however, in that a significant number of these roads are unpaved. Again, the decision to pave a road lies with the state and unpaved roads are fairly common in the northeastern portion of the state.

*During the ten year planning period, both primary and secondary roads should be improved. An improved transportation network is essential to the economic well-being of the County*

and its residents.

#### Recreation

Present recreational facilities in the County which are open to the public are all boating access areas. *There are no parks, swimming areas or playgrounds which can be used by County residents.* During the ten year planning period, it would be optimal for both Town Councils and the County Commission to seriously consider some sort of recreational facility not entirely devoted to boating. The lack of such a facility was noted by many citizens in the Perquimans County Land Use Survey as the most important problem facing the County.

## PROJECTED NEED OF PLANS, POLICIES AND REGULATIONS

### Perquimans County

*The County is presently utilizing subdivision regulations to control development but, as previously discussed, they are in need of basic revisions. Since the regulations were adopted by the County Commission in 1973, changes in state law have occurred which need to be incorporated. Another difficulty which exists with the present regulations has to do with their inability to control the subdivision of land when it is divided and sold a few lots at a time. By utilizing this type of development, the intent of the regulations can be entirely circumvented. This constitutes a problem which is in need of attention.*

*One of the most pressing needs in the County is for some form of zoning control. In the southern portion of the County, as previously discussed in the section entitled, "Existing Land Use", the need is particularly severe. This is the primary "growth area" and necessitates protective measures being enacted. It is crucial to control the type of development presently occurring in order to prevent the area from becoming a depository for low value second homes and mobile homes. This has occurred in neighboring counties closer to the Norfolk Virginia metropolitan area and is beginning to occur in Perquimans County. A good set of zoning ordinances would help insure more balanced development and ease the potential tax*



burden which would eventually be imposed on County residents by low quality development.

These ordinances would also have the effect of protecting property values throughout the County and insuring that incompatible growth will not occur side-by-side. In the northern and central portions of the County, however, development pressure is not as intense and the ordinances need not be as stringent.

*Another type of control which would aide the County to control the type of development which will occur is a set of building codes.* These codes would assure minimum standards of construction and contribute to better housing throughout the County. The state has written and published a set of building codes which are easily obtained and already have the force of law. What is lacking in Perquimans County is enforcement capacity. The addition of a building inspector would rectify this difficulty and increase the quality of construction in the area.

*A final pressing need is for a set of floodplain regulations in order to bring the County into compliance with the Flood Disaster Protection Act of 1973.* Under the provisions of the Act, floodplain regulations must be enacted and enforced before local residents can obtain flood insurance or borrow money from federal agencies or private institutions subject to federal regulations. At present, the Bear Swamp Watershed Project is being held up because floodplain regula-

tions have not been adopted.

In the near future, however, the County Commission will probably enact such regulations and come into compliance with the Act. Planning funds have already been requested from the United States Department of Housing and Urban Development for that purpose.

#### Town of Hertford

*The Town of Hertford has, but is not currently enforcing, subdivision regulations, zoning ordinances and building codes. Both the subdivision regulations and zoning ordinances are in need of revision for various reasons and some sort of enforcement capability is needed.*

The addition of an extraterritorial limit has imposed the need for new zoning in an area not previously covered by such ordinances. This will be an undertaking by the Town Planning Board and Town Council working in conjunction. Growth in this area must be controlled because of Town plans to annex the area once it becomes sufficiently developed to require municipal services.

*The Town, like the County, is facing the problem of enacting floodplain regulations. In this particular circumstance, however, the Town Council has indicated a desire to let the Town come under regulations which will be enacted by the County.*

Town of Winfall

The Town of Winfall is not presently involved in land use control and, in all liklihood, will not be in the near future. County regulations and ordinances should be sufficient to guide growth in future years.

## LAND CLASSIFICATION SYSTEM

### Discussion of Purpose

In recent years the people of North Carolina have expressed an awakened concern for our most basic natural resource, the land. There is concern that the absence of well understood and widely accepted land use policies may result in needless development of agriculturally productive lands, critical wildlife habitat, wetlands, and scenic resources. These lands are important to the people in their natural state and their destruction would represent an almost irretrievable loss.

One of the fundamental new tools for managing land in coastal North Carolina is the Land Classification System adopted by the Coastal Resources Commission. *The system currently consists of five (5) classes of land, namely: developed, transition, community, rural and conservation.* Each of these classes is mutually exclusive, and taken together they are designed to cover all the lands of the State.

*First, the land classes are categories to accomodate all the types of land uses.* Local land use plans frequently contain numerous land use categories, which is not characteristic of the new System. The classes in the System are only five (5) in number and may, therefore, be used to create a more generalized countywide plan.

*Second, the land classes represent degrees of land devel-*

opment intensity or population density. The Land Classification System covers the entire range of development intensity that may be desired by state or local government.

*Third, the land classes are an expression of commitment to public facilities and services.* While some classes may require few or no public services, others entail a commitment to water, sewer and streets. Because intensive development puts new demands on basic public services, future patterns of land use and commitment to public services are inseparable.

The classification of land is the responsibility of local government. The Land Policy Act directs the State to establish consistent rules and standards of the Land Classification System, itself. Once local government has classified the land, an effort should be made to help insure that funds for new public facilities, any purchases of land or easements, and regulation of development will be consistent with the classifications.

*The Land Classification System will serve as a basic tool for coordinating numerous policies, standards, regulations, and other governmental functions at the local, state and even federal level.* This function of coordination may be described in four (4) applications:

*First, the system is a method of linking local land use plans and state land use policies.* Lands are classified by local government but are subject to review by the Coastal

Resources Commission in order to establish conformance with the guidelines of the system. Ultimately the plans of the twenty (20) coastal counties will combine to form the plan for the entire coastal region.

*Second, the system provides a guide for budgeting and planning for public investments in land.* The "conservation" class should alert state and local agencies to areas that should be given high priority for purchase as public outdoor recreation lands. The "transition" class should alert local and state officials to begin acquiring land and easements necessary for such public services as schools, streets and other facilities. By identifying such lands at present, state and local governments can more easily work toward common ends in the future.

*Third, the system will provide a framework for coordinating regulatory policy.* The different classifications are each in need of somewhat diverse regulations. In "conservation" lands the state should focus a great deal of attention while in "transition" lands local government should apply zoning and subdivision controls.

*Fourth, the system has the potential to provide a framework for a more equitable distribution of the land tax burden.* Land classified as "rural" should not be taxed at the same rate as "developed" land. Taxes should reflect the higher value of land associated with intensive development.

In summary, the Land Classification System provides for

both local and state involvement in land use planning and management. It offers a wide range of choices for local government in deciding its own future and at the same time provides increased assurance that basic land use needs will be met in coastal North Carolina.

### Land Classifications

The Land Classification System of the Coastal Resources Commission contains five (5) classes of land.

1. Developed - where existing population density is moderate to high and where there are a variety of land uses which have the necessary public services.
2. Transition - where local government plans to accommodate moderate to high density development during the following ten year period and where necessary public services will be provided to accommodate that growth.
3. Community - where low density development is grouped in existing settlements or will occur in such settlements during the following ten year period and which will not require extensive public services now or in the future.
4. Rural - where the highest use is for agriculture, forestry, mining, water supply, etc., based on their natural resources potential; also, lands for future needs not currently recognized.
5. Conservation - fragile, hazard and other lands necessary to provide for the public health, safety or welfare.

### Developed

*The purpose of classifying lands "developed" is to identify areas which are presently provided with essential public services and have a relatively high population density. Consequently, it is distinguished from areas where significant growth and/or new public service requirements will occur. Continued development and redevelopment should be encouraged to provide for orderly growth in these areas.*

Developed lands, as defined by the Coastal Resources Commission, are those areas with a minimum gross population density of 2,000 people per square mile. These areas must contain public services including water and sewer systems, educational systems and road systems; all of which are able to support the present population and its accompanying land uses including commercial, industrial, and institutional.

### Transition

*The purpose of classifying "transition" lands is to identify areas where moderate to high density growth is to be encouraged and where any such growth that is permitted by local regulation will be provided with the necessary public services. These lands, as defined by the Coastal Resources Commission, are areas required to support estimated population growth at a minimum gross density of 2,000 people per square mile. A proposed increase of 10,000 persons, for example, would neces-*



sitate the designation of transition lands of up to five (5) square miles, but no more. In addition, consideration must be given to the cost of public services in transition areas, and local government is encouraged to estimate the approximate cost of providing public services where they do not already exist.

Lands to be classified transition should be considered in the following order:

1) *First priority is for lands which presently have a gross population density of more than 2,000 people per square mile, but do not qualify as "developed" because they lack the necessary minimum public services. These areas may not be expected to accommodate additional population, but they will require funds for services to avoid public health and safety problems.*

2) *Second priority is for lands that have all the necessary public services in place, but which lack the minimum gross population density of 2,000 people per square mile needed to qualify the area as "developed". These areas therefore have not utilized the capacity of the existing services.*

3) *Additional lands necessary to accommodate the remainder of the estimated transition growth for the ten-year planning period. In choosing lands for the transition class, such lands should not include:*

a. Areas with severe physical limitations for dev-

elopment with public services.

- b. Lands which meet the definition of the "conservation" class.
- c. Lands of special value such as prime agricultural lands.

### Community

*The purpose of the "community" classification is to identify existing and new clusters of low density development not requiring major public services. The community class, as defined by the Coastal Resources Commission, includes existing clusters of one or more land uses such as rural residential, church, school, general store, industry, etc.*

This class will also provide for all new rural growth when the lot size is ten acres or less. Such clusters of growth may occur in new areas, or within existing community lands. In choosing lands for "community" growth, such lands should not include:

- a. areas with severe physical limitations for development;
- b. areas meeting the definition of the "conservation" class;
- c. lands of special value such as prime agricultural lands.

In every case, the lot size must be large enough to

safely accommodate on-site sewage disposal where no public water or sewer facilities will be required in the future. Limited public services such as roads and electric power should be provided in the area.

As a guide for calculating the amount of land necessary to accommodate new rural community growth, a gross population density of 640 persons per square mile or one (1) person per acre should be used. If, for example, 1,000 new people are expected to settle in low density clusters during the following ten year period, then roughly 1,000 acres of land should be allocated for new growth in community class areas.

#### Rural

*The purpose of the "rural" classification is to identify land for long-term management and productive resource utilization, and to determine where limited public facilities will be provided. Development in such areas should be compatible with resource production. The rural class, as defined by the Coastal Resources Commission, includes all lands not in the developed, transition, community and conservation classes.*

#### Conservation

*The purpose of the "conservation" class is to identify land which should be maintained essentially in its natural*

*state and where limited or no public services are provided.*

Lands to be placed in the conservation class are the least desirable for development because:

1. They are too fragile to withstand development their natural value and/or;
2. They have severe or hazardous limitations to development and/or;
3. Though they are not highly fragile or hazardous, the natural resources they represent are too valuable to endanger by development.

#### Review Procedure

The local land classifications and the map, itself, must be reviewed and updated every five (5) years by local government. Each class is designed to be broad enough so that frequent changes in maps are not necessary. But in extreme cases, such as the placement of a large residential or industrial facility in a county, the Coastal Resources Commission can allow local government to revise its land classification map before the five (5) year period has expired.

#### Land Classification Maps

The land classification maps for both the Town of Hertford and Perquimans County utilize the Land Classification System, as previously discussed. Although all five (5)

classes of land are not present in the County and Town maps (no areas meet the criteria established for "developed lands") these maps represent the ten-year planning goals of the respective governmental entities.

It must be noted, in the Perquimans County Land Classification Map, that the Harvey Point Defense Facility is *not classified* due to its nature. This area is owned by the federal government and is not subject to state and local planning efforts. There do not appear to be any plans to expand the facility or increase its already limited impact on Perquimans County.

LAND CLASSIFICATION MAPS  
(See Pocket Inside Back Cover)

## LAND USE COMPATIBILITY PROBLEMS

### Perquimans County

*There are, at present, no significant land use compatibility problems in the County but such problems are beginning to appear in the southern portion along the rivers and sound. The current trend toward recreational and second-home development is expected to continue although projected population figures indicate that growth will not be substantial.*

At present, according to information supplied by the Perquimans County Register of Deeds, there are approximately four thousand lots in developments located in the southern portion of the County. Of these, slightly more than half remain unsold and only a very small percentage have actually been built on. It is important to note that property which is being purchased on a time payment basis is not recorded as "sold" in the Register of Deeds Office until the final payment is made and the title is transferred. Therefore it can be safely assumed that some of the lots listed as "unsold" are actually being purchased on a monthly payment basis.

The significance of these figures to potential growth is apparent. The future development of land which has already been subdivided and sold, but not built on, would result in a tremendous population increase for the area. This is an inherent factor which must be considered in terms of both the

provision of public services and the capability of the land to sustain such growth. *It is not anticipated that this type of growth will occur in the next decade but the potential is there.* New zoning ordinances and revised subdivision regulations cannot regulate development which will occur in areas which have already been platted and recorded in the Register of Deeds Office.

Although land use controls cannot rectify past mistakes, they are extremely important to assure that adverse trends are not carried forward into the future. All new developments, either residential or recreational, should be designed and constructed in a manner consistent with the capability of the land and water resources in the area and be of sufficient quality to provide for the cost of additional public services which will be required. These objectives, with regard to new development, can be met through zoning and subdivision controls.

#### Town of Hertford

*There are no presently existing land use compatibility problems in the Town other than the location of several gas and oil storage facilities inside the Town limits.* This poses a difficult problem for elected officials and concerned citizens due to the extreme cost which would be associated with relocating such facilities in a less populated area. Assistance in this area will be requested from any available state or federal funding sources.



Future residential and commercial growth that is expected to occur immediately outside existing Town limits will be subject to Town land use controls in the newly-adopted "extra-territorial limit". Revision of the existing subdivision regulations and the adoption of new zoning ordinances for the area should combine to assure good future residential and commercial development.

#### Carrying Capacity of the Land and Water

*One of the most crucial factors in the entire development planning process is the ability of the land and water to sustain growth. A wide variety of variables determine this capacity and it can increase or decrease depending on how significantly these variables are altered. For example, the carrying capacity of a specific tract of land with water and sewer facilities is considerably higher than the capacity of the same tract utilizing individual septic tanks.*

In Perquimans County as in most of the coastal region, the major natural limitations have to do with soil types and high water tables. These factors have important implications for building foundations, water supplies and the use of septic tanks. For a more complete discussion of factors relating to septic tanks and water quality, see Appendix D of this document. *Given the present population and economic projections, the issue of carrying capacity arises only in the southern*

*portion of the County.* Problems associated with development in that area have been previously discussed and measures outlined to deal with the growth potential of the area.

Other portions of the County are not expected to develop significantly in the foreseeable future and are not yet beginning to approach the threshold of tolerance. The Town of Hertford has both municipal water and sewer systems and plans to accommodate projected growth within existing Town limits and its Extraterritorial limit. The presence of such systems and good land use regulations will serve to assure that the capacity of the land to sustain growth will not be exceeded.

## CONSTRAINTS TO DEVELOPMENT

One of the most important elements of coastal land use planning is the identification of constraint areas. In the Perquimans County Land Use Plan these are divided into both areas with *physical limitations* and *areas of resource potential*. Maps and a general discussion of these areas are included in this section on the following pages.

### Areas with Physical Limitations

Areas which impose physical limitations to growth in Perquimans County are those which exhibit such characteristics as poor drainage, excessive shoreline erosion, unsuitability for the installation of septic tanks, and others. All areas of environmental concern are necessarily included in this subsection because of the permit restrictions which will be adopted at a later date. Each of the areas with such inherent limitations are discussed and mapped on the following pages.

### General Soil Associations

The general soils map shows seven (7) soil associations, their approximate location, and extent. A soil association consists of two (2) or more soils which make up the major portion of the landscape. Each of the associations are described on this and the following pages as to soil characteristics, location, and extent.

Soil Names and Acres Within Each Association<sup>1</sup>

<u>Soil Type</u>	<u>Number of Acres</u>	<u>Percent of Total County Acreage</u>
Conetoe	1,336	
Wando	1,169	
Dragston	835	
Conetoe-Wando-Dragston Assoc.	<u>3,340</u>	<u>2.0</u>
Bladen	34,576	
Lenoir	26,893	
Craven	15,367	
Bladen-Lenoir-Craven Assoc.	<u>76,836</u>	<u>46.0</u>
Bladen	18,707	
Bayboro	18,707	
Portsmouth	16,035	
Bladen-Bayboro-Portsmouth Assoc.	<u>53,449</u>	<u>32.0</u>
Bertie	6,430	
Tomotley	6,430	
Altavista	5,511	
Bertie-Tomotley-Altavista Assoc.	<u>18,371</u>	<u>11.0</u>
Wickham	1,447	
Altavista	1,280	
Wahee	612	
Wickham-Altavista-Wahee Assoc.	<u>3,339</u>	<u>2.0</u>
Dorovan	5,846	
Johnston	2,505	
Dorovan-Johnston Assoc.	<u>8,351</u>	<u>5.0</u>
Dare	1,447	
Ponzer	1,447	
Wasda	443	
Dare-Ponzer-Wasda Assoc.	<u>3,337</u>	<u>3.0</u>

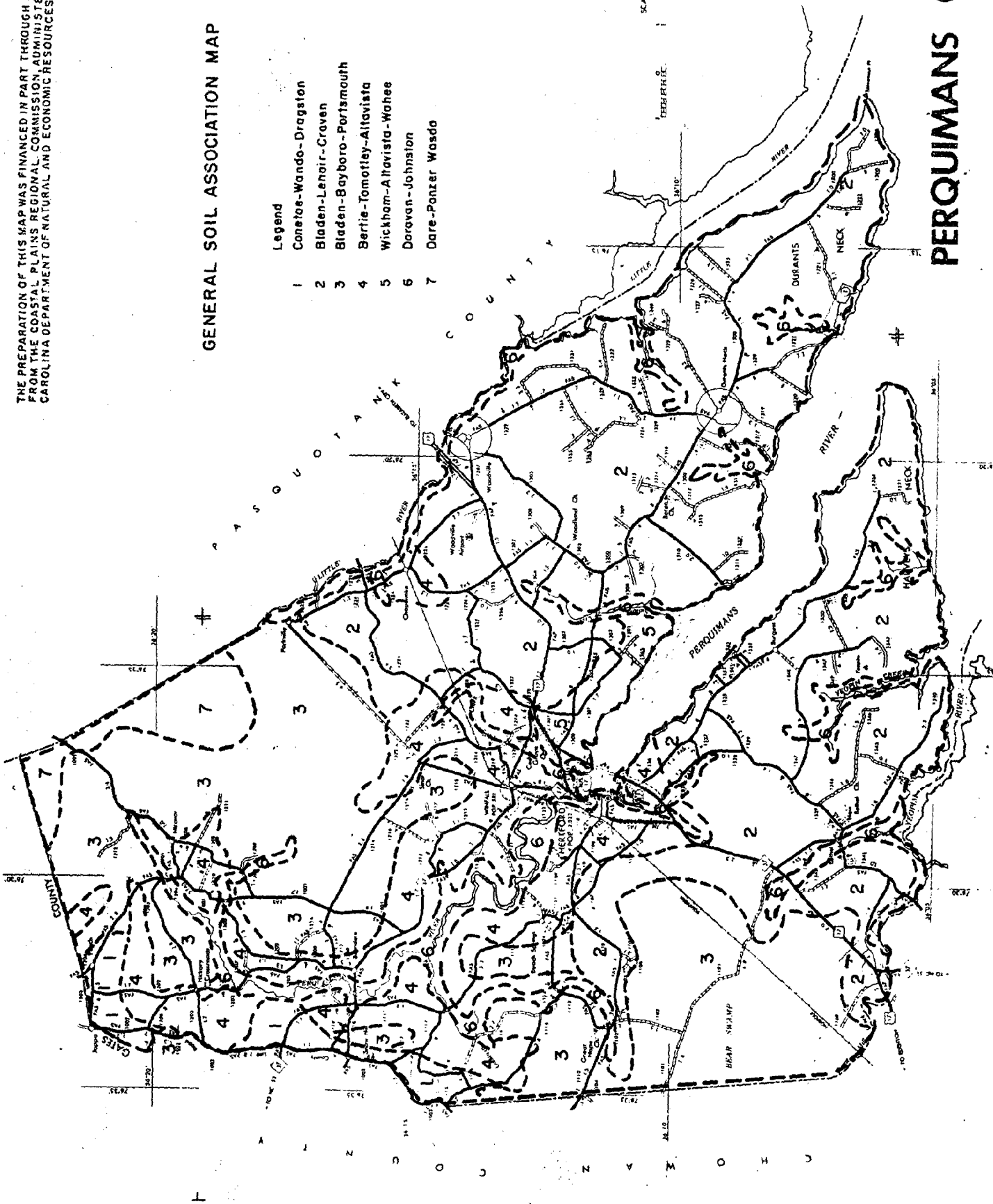
<sup>1</sup>Minor acreages of other similar soils are included in the acreages for each major soil.

Source: U.S. Department of Agriculture, Soil Conservation Service

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# GENERAL SOIL ASSOCIATION MAP

- Legend
- 1 Conetoe-Wando-Drayton
  - 2 Bladen-Lenoir-Craven
  - 3 Bladen-Bayboro-Portsmouth
  - 4 Bertie-Tomotley-Altavista
  - 5 Wickham-Ahavista-Wahes
  - 6 Darevan-Johnston
  - 7 Dare-Panzer Wasdo



# PERQUIMANS COUNTY

## Description of Soil Associations:

### 1. Conetoe-Wando-Dragston Association:

*Well drained (Conetoe), excessively drained (Wando), and somewhat poorly drained (Dragston) soils with thick grey sandy surfaces and friable to loose yellowish red to mottled grey and yellow sandy subsurface layers.*

This association makes up approximately two (2) percent of the total acreage in the County. It occurs as a narrow strip contiguous to the County line from a point just below the intersection of county road 1002 and 1115 to the Gates County line at Joppa.

The Conetoe series makes up approximately 35 percent of the association. They are well drained sandy soils with thick surface layers over the reddish-yellow, friable, loamy subsurface layers underlain by thick, sandy substratum.

The Wando series makes up approximately 30 percent of the association. They are excessively drained, deep reddish yellow, loose sandy soils occurring primarily in the eastern edge of the County between Cannon's Ferry and White's Landing.

The Dragston series makes up approximately 20 percent of the association. They are somewhat poorly drained soils with sandy surfaces and thin friable loamy subsurfaces. They occur as small random areas within the association on the lower elevation. Small areas of soils such as very poorly drained Dawhoo and Torhunta and moderately well drained Pactolus make up the remainder of the association.

### 2. Bladen-Lenoir-Craven Association

*Poorly drained (Bladen), somewhat poorly drained (Lenoir), and moderately well drained (Craven) soils with gray to dark gray friable surface layers and thick very firm gray to yellow or yellow and gray, clay subsurface layers.*

This association makes up approximately 46 percent of the county's total acreage. It includes practically all of the southern part of the county below the southern railroad. This area is predominantly flat with the Bladen soils predominating. The Craven and Lenoir soils occur as small narrow ridges on the sloping area bordering the major drainage systems.

The Bladen soils make up approximately 40 percent of the association. They are poorly drained soils with gray to dark gray thin sandy surfaces over thick dark gray, very firm clay subsoils. They occur on the side slopes of the gently sloping areas.

The Lenoir soils make up approximately 30 percent of the association. They are somewhat poorly drained soils with thin, gray sandy surfaces over thick, gray and yellow very firm clay subsoils. They occur on the side slopes of the gently sloping areas.

The Craven soils also make up approximately 15 percent of the association. They are moderately well drained soils with gray sandy surfaces over very firm, yellow clay subsoils with gray mottles occurring between 20 and 30 inches. They generally occur on the steeper sloping topography, but are also found on broad nearly level flats in the higher landscapes. Small areas of soils such as Duplin, Bertie, State, Tomotley, and Dunbar make up the balance of the association.

### 3. Bladen-Bayboro-Portsmouth Association

*Poorly drained (Bladen) and very poorly drained (Bayboro, Portsmouth) soils having thick black to dark gray sandy to loamy surfaces over deep very firm to friable, gray sandy clay to clay subsoils.*

This association makes up approximately 32 percent of the county's total acreage. It occurs as two large areas, one in the northwestern sector in the Parksville and Nicanor sector, and the other in the southwestern portion known as Bear Swamp. These soils occur on the lower landscapes of relatively flat relief.

The Bladen soils make up approximately 30 percent of the association. They are previously described under the "Bladen Soils" of association number 2 above.

The Bayboro soils make up approximately 30 percent of the association. They are very poorly drained soils with thick black loam surfaces over firm to very firm gray clayey subsoils. They occur as relatively small but homogeneous areas throughout the Bear Swamp area north of Edenton.

The Portsmouth soils make up approximately 25 percent of the association. They too, are very poorly drained soils with moderately thick black loamy surfaces over friable mottled dark gray and red sandy clay loam subsoils with stratified

or sandy substratums within 4 feet. Although these soils are classed as very poorly drained they respond well to proper management and are considered the better agricultural soils of the association. Small areas of such soils as very poorly drained Dawhoo, Torhunata, Weeksville and Cape Fear make up the remainder of the association.

#### 4. Bertie-Tomotley-Altavista Association

*Somewhat poorly drained (Bertie), poorly drained (Tomotley) and moderately well drained (Altavista) soils with gray sandy surfaces with gray to yellow friable sandy clay loam subsoils underlain by a sandy substratum at approximately 40 inches.*

This association makes up approximately 11 percent of the county's total acreage. This association occurs as elongated patterns paralleling the Perquimans River north of US 17. A small area also occurs in the vicinity of Capanoke. This association occupies an intermittent position on the landscape between the higher, better drained soils and those of the lower elevation consisting of the poorly and very poorly drained soils.

The Bertie soils make up approximately 30 percent of the association. They are somewhat poorly drained soils with gray sandy surfaces 8 to 10 inches thick over mottled yellow and gray friable loamy subsoils. They have a sandy substratum within 30-40 inches of the surface. Under good management these soils will produce good yields of a wide variety of crops, including peanuts and tobacco.

The Tomotley soils also make up approximately 30 percent of the association. They are poorly drained soils with gray sandy surfaces and gray, faintly mottled with yellow, loamy subsoils which are underlain by a sandy substratum at approximately 36-40 inches. These soils occur on the higher gently sloping elevations within the association. Small areas of such soils as poorly drained Roanoke, Weston, State and Seabrook make up the remainder of the association.

#### 5. Wickham-Altavista-Wahee Association

*Well drained (Wickham), moderately well drained (Altavista) and somewhat poorly drained soils with gray sandy surfaces over friable to firm, loamy to clayey subsoils with sandy substratum occurring between 30 to 50 inches of the surface.*



This association makes up approximately 2 percent of the county's total acreage. It occurs as a singular area south of Hertford on the east bank of the Perquimans River from Suttons Creek to U.S. 17. This association reflects a high terrace landscape perimetered by broad extensive flat areas of very firm clayey soils.

The Wickham soils make up approximately 40 percent of the association. They are well drained soils with gray sandy surfaces and friable to firm reddish yellow loamy subsoils underlain by coarse sandy substratum at approximately 36-40 inches. These soils reflect slight limitations for most all non-farm and farm use.

The Altavista soils also make up approximately 35 percent of the association. They are quite similar to the Wickham soils described above except in drainage. They occur on broad flat areas of the higher landscapes.

The Wahee soils make up approximately 15 percent of the association. They are somewhat poorly drained soils with thin, gray sandy surfaces over very firm mottled reddish yellow and gray clayey subsoils. A sandy substratum occurs at approximately 40-50 inches. Small areas of such soils as Roanoke, Bertie and Dogue make up the remainder of the association.

#### 6. Dorovan-Johnston Association

*Very poorly drained soils with highly decomposed organic surface layers ranging from 12 inches to more than 10 feet over stratified or gray and white fine sandy substratums.*

This association makes up approximately 5 percent of the county's total acreage. They occur in the flood plains of the major drainage systems throughout the county and as peripheral areas along the Little River.

The Dorovan soils make up approximately 60 percent of the association. These soils were formerly referred to as "Swamp" lands and are inundated the year around.

The Johnston soils make up approximately 20 percent of the association. These soils have also been referred to as "Swamp" lands. They differ, however from the Dorovan soils in that they have a relatively thin organic surface layer over stratified sands and loamy mineral soils. They occur as fringe areas in the upper flood plains. They are inundated for most of the year, but in extreme dry seasons the watertable may recede to ground level or to within a few inches of this level. Small areas of Dare, Bibb and Ponzer soils make up the remainder of the association.

7. Dare-Ponzer-Wasda Association

*Very poorly drained soils with highly decomposed organic surface layers ranging from 16 to 50 inches over friable mineral subsurface layers.*

This association makes up approximately 2 percent of the county's total acreage. It occurs as a single small area in the extreme northeastern section of the county northeast of Nicanor.

The Dare soils make up approximately 40 percent of the association. They are very poorly drained soils with thick highly decomposed organic surface layers ranging from 50 inches to more than 10 feet. They are highly impregnated with logs and stumps and are extremely acid. They are generally underlain with sandy substratums.

The Ponzer soils make up approximately 40 percent of the association. They have organic surface layers ranging from 17 to 50 inches over friable sandy clay loam subsurface layers.

The Wasda soils make up approximately 10 percent of the association. These soils are quite similar to the Ponzer except that the organic surface layer is less than 16 inches thick. The Wasda soils occur on the peripheral edge of the bog or pocassin like areas where these soils are developed. Small areas of such soils as Dawhoo, Torhunta and Portsmouth make up the remainder of the association.

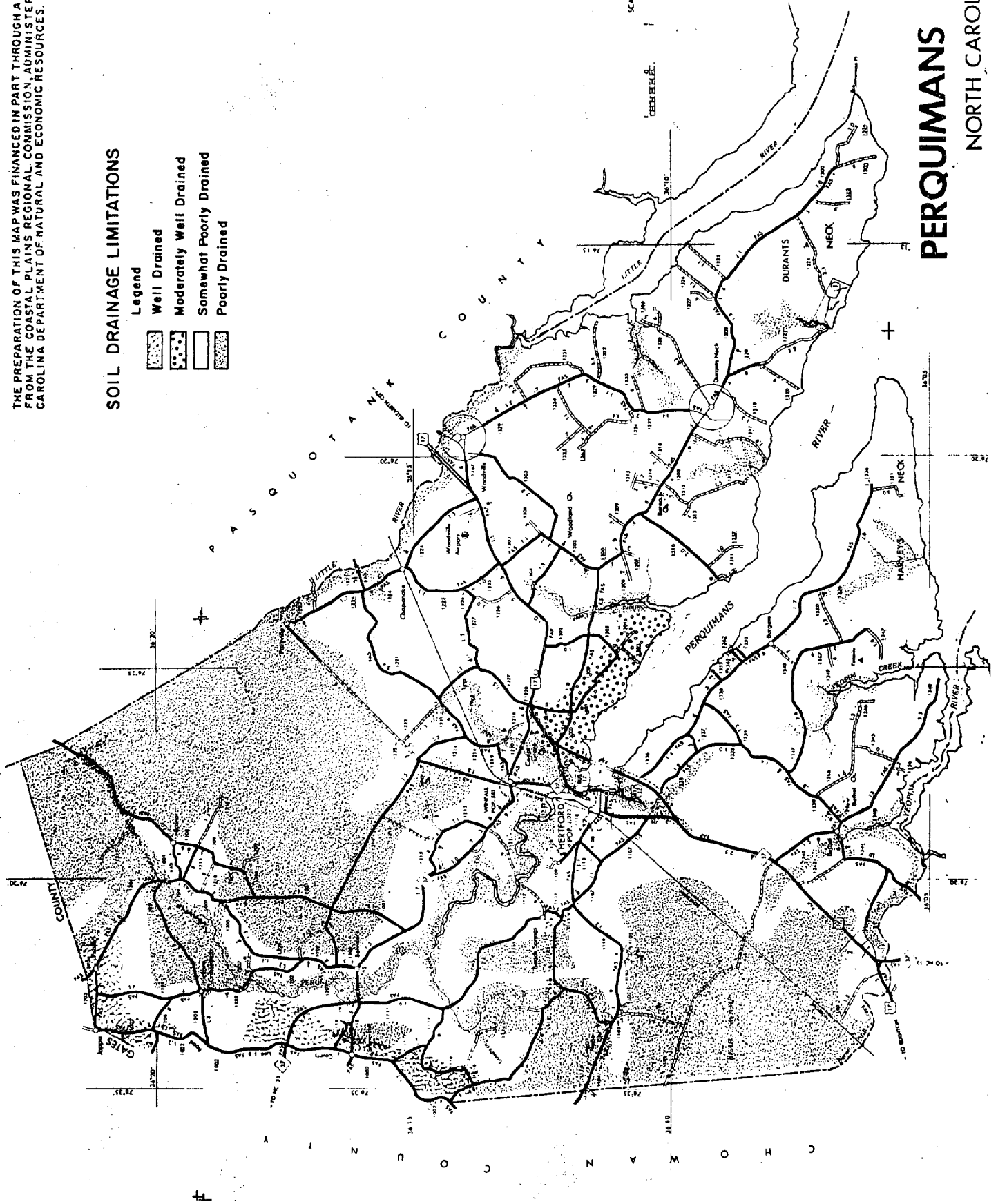
Soil Drainage Limitations

The natural drainage of a soil is indicated by the presence or absence of gray colors in the soil. The amount of gray colors and their proximity to the surface of the soil is a good indication of the length of time the soil is saturated with water. Saturation may be the result of a high permanent water table or an impervious layer within the soil which holds excess water

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# SOIL DRAINAGE LIMITATIONS

- Legend
- Well Drained
  - Moderately Well Drained
  - Somewhat Poorly Drained
  - Poorly Drained



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for significant periods. The drainage classifications used are explained below.

Well drained soils: These soils have no gray colors within 30 inches of the surface of the soil. Subsoil colors are red to yellow

Moderately well drained soils: These soils have brown to yellow subsoils with gray colors 20 to 30 inches below the surface of the soil.

Somewhat poorly drained soils: These soils have brown or yellow subsoils mottled with gray colors in the upper part and are dominantly gray in the lower part.

Poorly drained soils: These soils are predominantly gray from the surface downward. Less than 40 percent of the soil mass is brown or yellow.

#### Soil-Related Septic Tank Limitations

One of the most important issues in the coastal region is the use of septic tank waste disposal systems. It has been pointed out in Appendix D, "Water Quality in Perquimans County" that the use of such systems can have significant ramifications if soil conditions are not suitable. By utilizing the information provided by the General Soils Map, a determination has been made of the limitations on septic systems by soil associations. The classifications used are explained below.

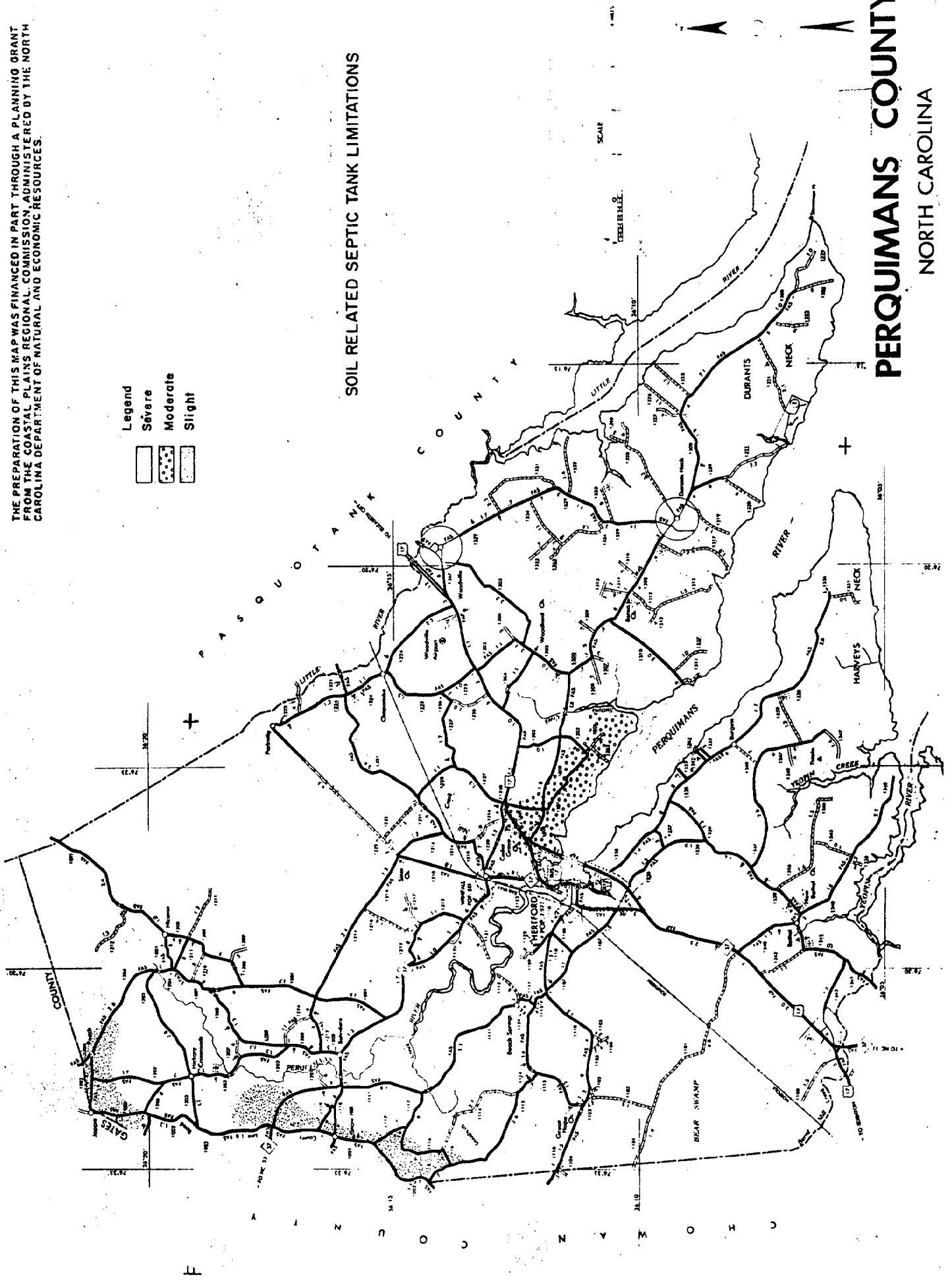
None to slight limitations: Soils have properties favorable to the use of septic tanks. They are well drained but not excessively so, and are not subject to high water tables. Limitations are so minor that they can be easily overcome. Good performance and low maintenance can be expected from these soils.

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- Legend
- Severe
  - Moderate
  - Slight

# SOIL RELATED SEPTIC TANK LIMITATIONS

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Moderate limitations: Soils have properties moderately favorable for the rated use. Limitations can be overcome or modified with special planning, design and maintenance.

Severe limitations: Soils have one or more properties unfavorable for the use of septic systems. They are either too sandy and permeable, too hard and compact (clays), subject to high water tables, or a combination of the three. Limitations are difficult and costly to modify or overcome requiring special design and intense maintenance of the system or major soil or water table modifications.



#### Soil-Related Foundation Limitations

In selecting a site for a home, industry, or recreation the suitability of the soils in each site must be determined. Some of the more common properties are soil texture, reaction, soil depth, shrink-swell potential; steepness of slopes, permeability, depth to hard rock, depth to the water table, and flood hazard. On the basis of these and related characteristics, *soil scientists and engineers have rated the major soil in each association for specific purposes.*

The ratings and limitations presented in map form are for houses that are not more than three stories high, without basements. They are made separately on residences utilizing a sewage system and for those depending on a septic tank with filter field for sewage disposal.

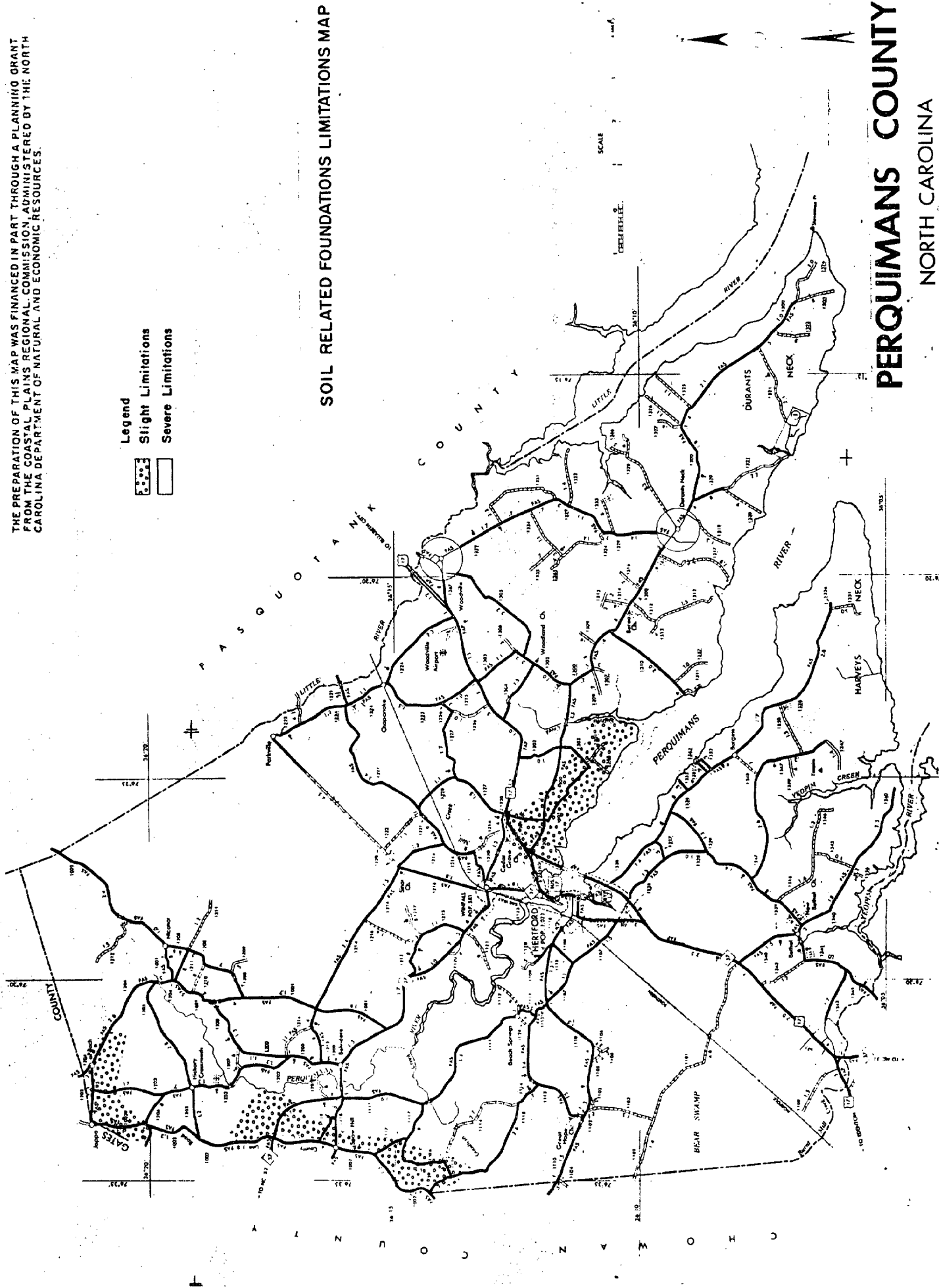
The ratings used are *slight* and *severe*. They are applied as the soils occur naturally and are defined on this page.

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Legend  
 Slight Limitations  
 Severe Limitations

# SOIL RELATED FOUNDATIONS LIMITATIONS MAP

PERQUIMANS COUNTY  
 NORTH CAROLINA



Slight limitations: Soils that have slopes of less than eight (8) percent, are well or moderately well drained, free of flooding and have a depth to hard rock of more than forty (40) inches are in this category. They have low shrink-swell potential and are relatively free of stones and other coarse fragments.

Severe limitations: Soils which have slopes of more than fifteen (15) percent, are cobbly or stony, are less than twenty (20) inches to hard rock and, are subject to a high water table, flooding or have a high shrink-swell potential, fit into this category.

### Sources of Water Supply

These areas provide the necessary water for human activity. Examples of these sources are *ground-water recharge areas*, *watersheds* and *wellfields*. These areas are important because they are the sources of all water supporting agriculture, industry, residences, and the other types of human activity occurring in the County. Protection and preservation of these sources is essential to insure an adequate, uncontaminated water supply for all varieties of users.

These source areas are constraints to development because of this possible pollution. Haphazard construction and/or drainage into the supply areas can cause contamination of the water. When this occurs, other source areas must be located and tapped.

### Flood Hazard Area

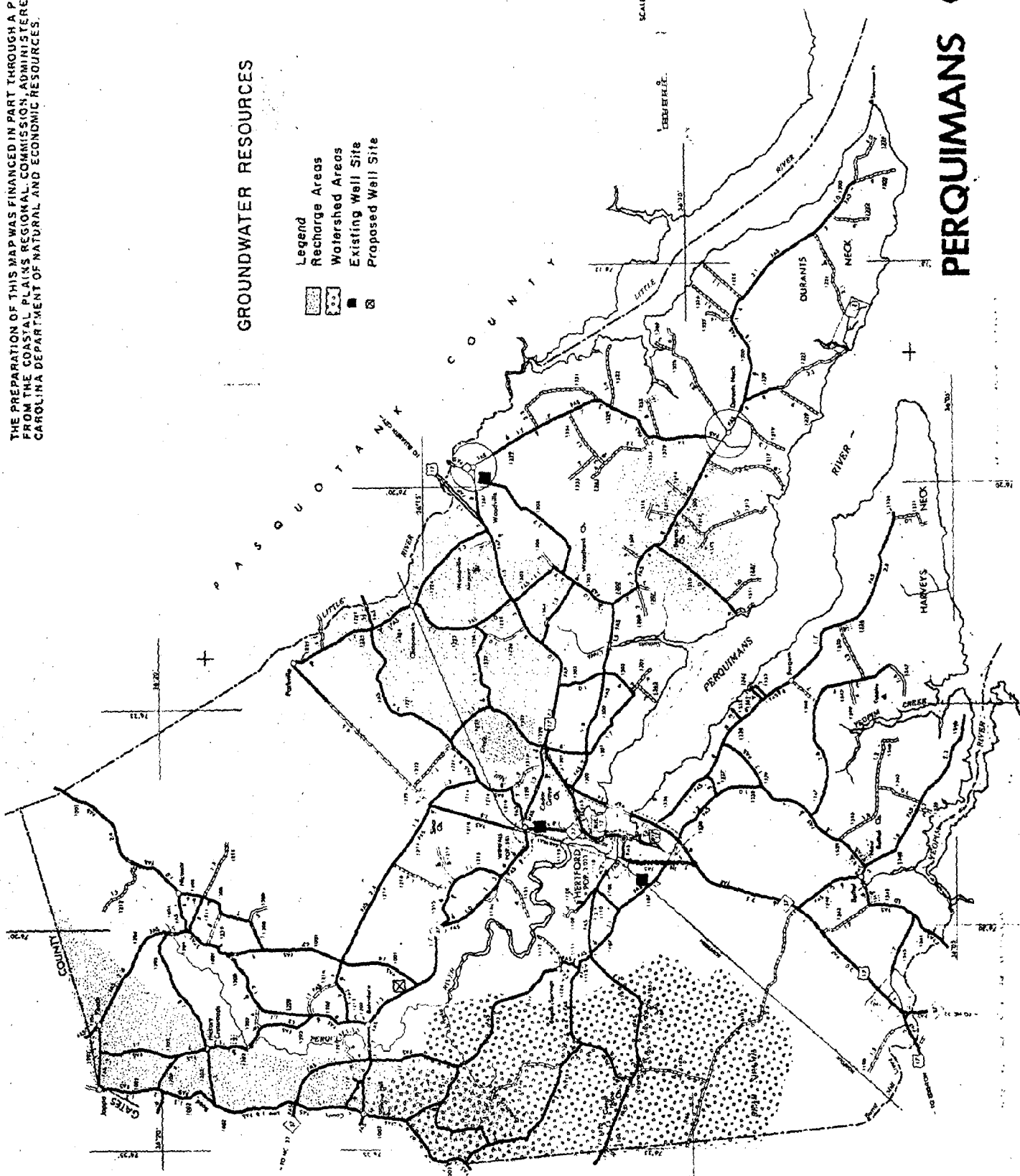
Due to the low-lying nature of the land in the County, possible flooding is a very real threat in several areas. Coastal floodplain is defined by the Coastal Resources as



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# GROUNDWATER RESOURCES

- Legend**
- Recharge Areas
  - Watershed Areas
  - Existing Well Site
  - Proposed Well Site



PERQUIMANS COUNTY

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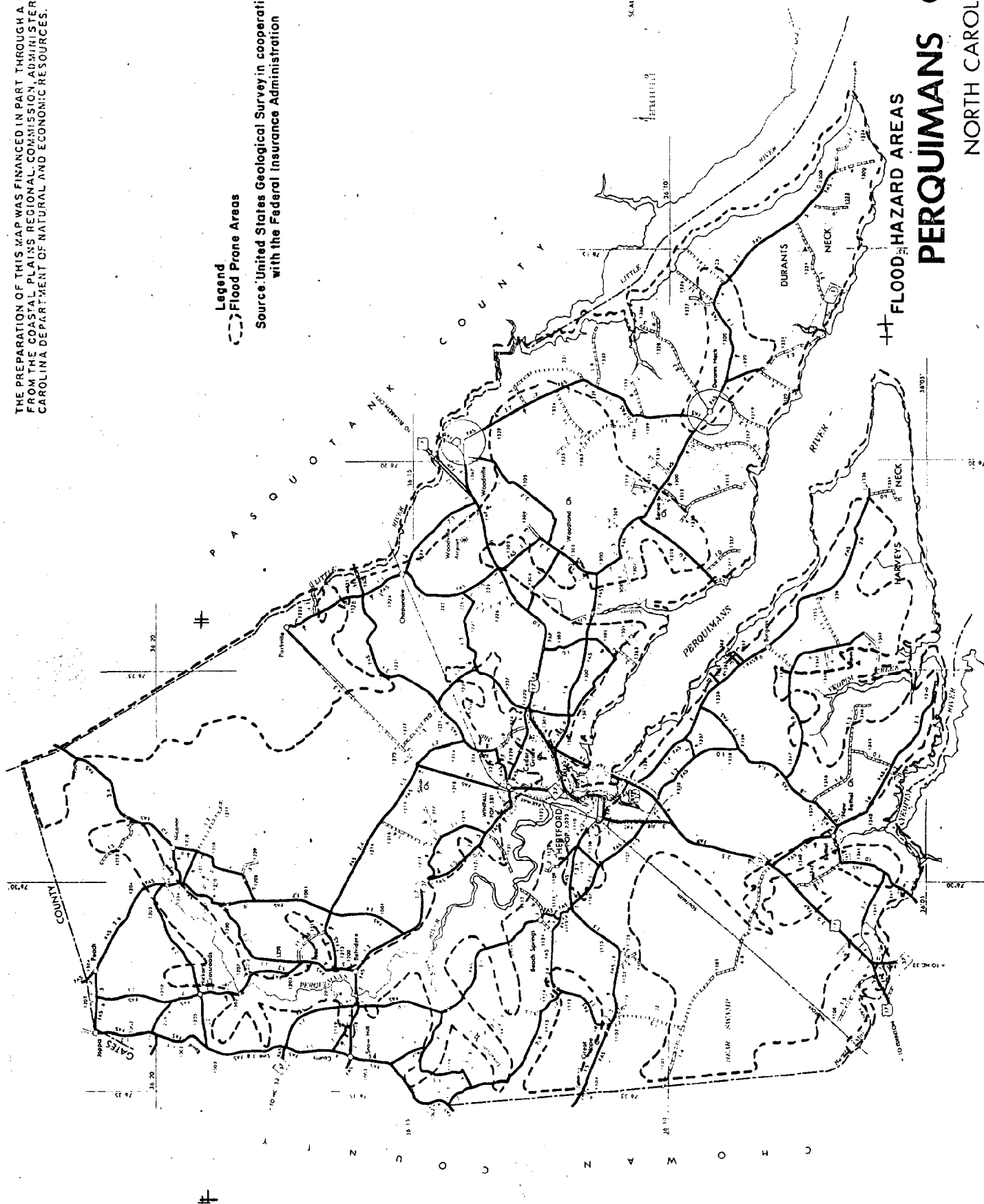
Legend  
--- Flood Prone Areas

Source: United States Geological Survey in cooperation with the Federal Insurance Administration

++ FLOOD HAZARD AREAS

# PERQUIMANS COUNTY

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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"... land areas adjacent to coastal sounds, estuaries or the ocean which are prone to flooding from storms with an annual probability of one percent or greater (100 year storm). These areas are analogous to the 100 year floodplain on a river."

It must be noted, however, that the information provided by the United States Geological Survey and subsequently reproduced in this plan is contested by local citizens. There is some question as to the validity of the flood prone areas, which will be dealt with when the County and the Town of Hertford come into compliance with the Flood Disaster Protection Act of 1973. *The actual flood prone areas designated in the maps contained in this section will, in all likelihood, be revised.*

#### Wetlands and Complex Natural Areas

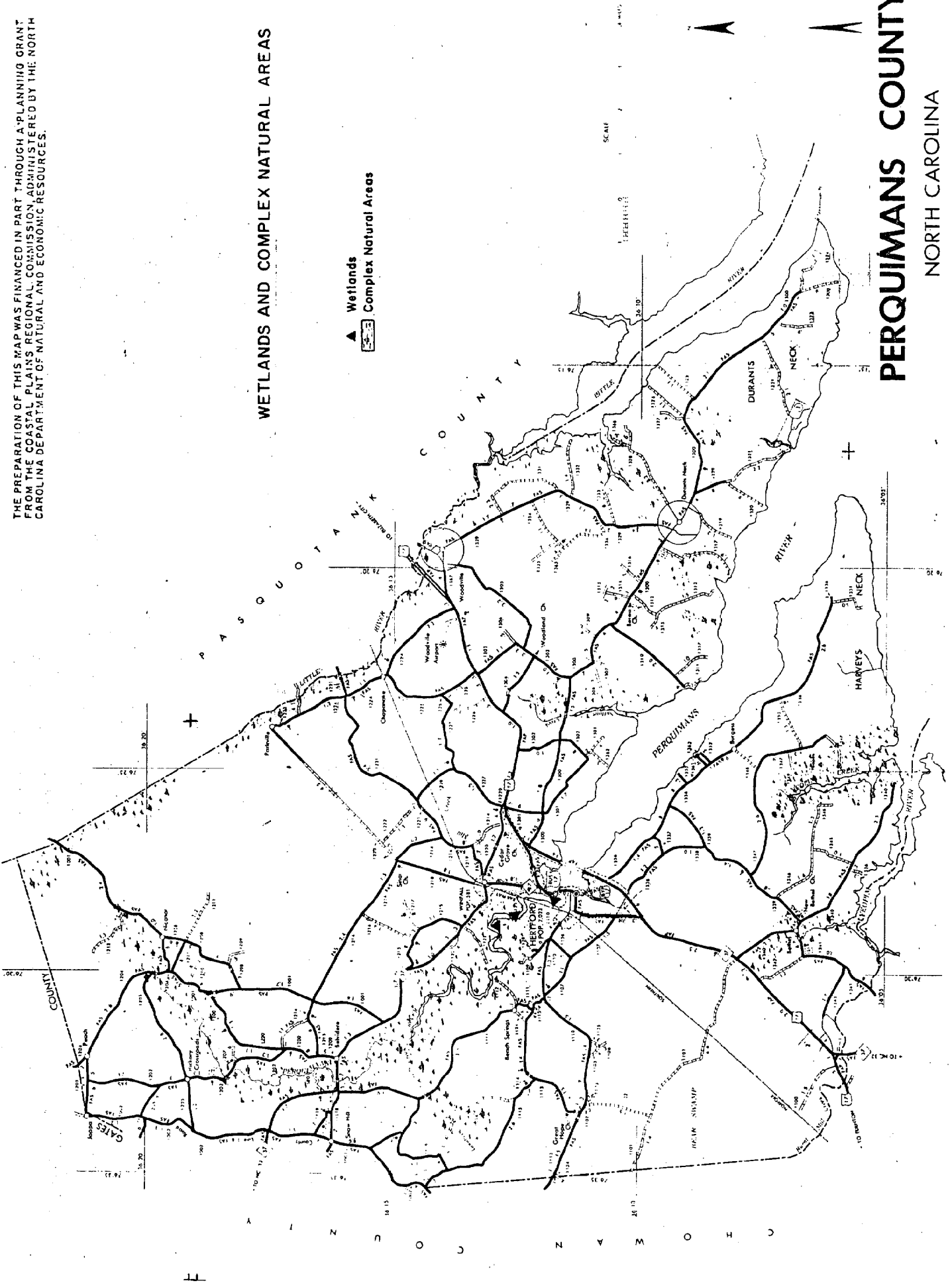
*Wetlands are marshes which are subject to regular or occasional flooding by tides, including wind tides. These marshlands produce nutrients vital in the food chain of the marine species in the estuarine systems. They are important to both commercial and sports fisheries and also help to deter shoreline erosion.*

*Complex natural areas which support native plant and animal communities provide habitat conditions that have remained essentially unchanged by human activity.*

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# WETLANDS AND COMPLEX NATURAL AREAS

- ▲ Wetlands
- Complex Natural Areas



These areas are important because they often provide habitat for rare or endangered species of plants and animals, and provide excellent sources for scientific research and study.

Both wetlands and complex natural areas are eligible for inclusion as *areas of environmental concern*. For a more detailed description of such areas and their significance, see the section entitled "Areas of Environmental Concern".

#### Estuarine Erosive Areas

One of the most significant problems in the County and the region, as a whole, is shoreline erosion. These areas are defined as those above the ordinary high water mark where excessive erosion has a high probability of occurring.

In rating the severity of such erosion, the Shoreline Erosion Inventory of North Carolina of 1975 prepared by the Soil Conservation Service was used. In Perquimans County the average rate of erosion was computed over a period of thirty-one years and has been broken down into *reaches* which are described below and on the following page.

##### REACH NO. 1

Av. width lost to erosion	21.3 feet
Av. height of bank	3.9 feet
Length of shoreline eroding	5.8 miles
Length of shoreline accreting	0 miles
Total length of shoreline	10.2 miles

##### REACH NO. 2

Av. width lost to erosion	144.0 feet
Av. height of bank	5.1 feet
Length of shoreline eroding	6.3 miles

Length of shoreline accreting	0 miles
Total length of shoreline	6.6 miles

REACH NO. 3

Av. width lost to erosion	17.0 feet
Av. height of bank	6.8 feet
Length of shoreline eroding	5.9 miles
Length of shoreline accreting	0 miles
Total length of shoreline	8.5 miles

REACH NO. 4

Av. width lost to erosion	16.0 feet
Av. height of bank	10.3 feet
Length of shoreline eroding	4.2 miles
Length of shoreline accreting	0 miles
Total length of shoreline	4.5 miles

REACH NO. 5

Av. width lost to erosion	49.2 feet
Av. height of bank	5.7 feet
Length of shoreline eroding	10.3 miles
Length of shoreline accreting	0 miles
Total length of shoreline	10.6 miles

REACH NO. 6

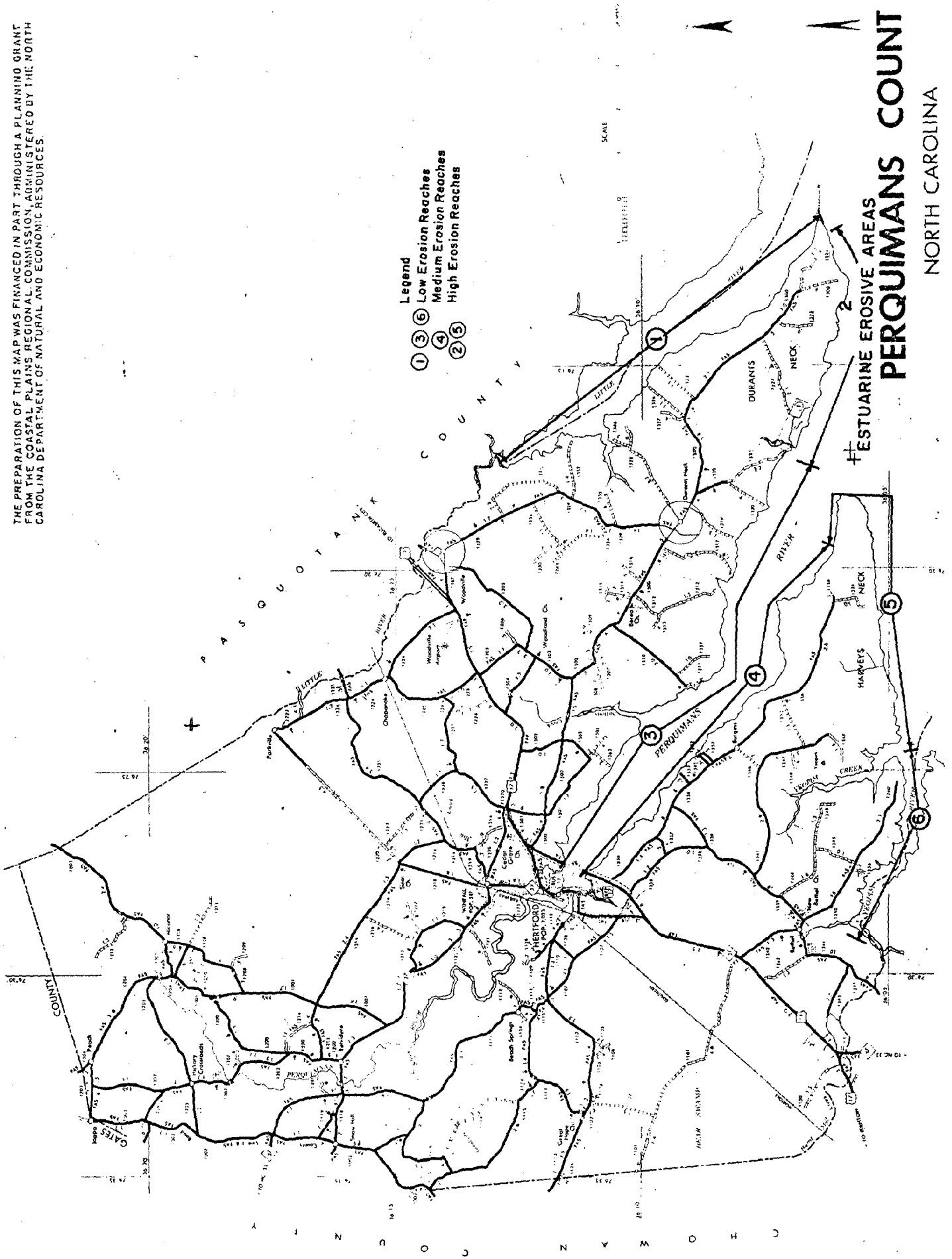
Av. width lost to erosion	103.2 feet
Av. height of bank	5.8 feet
Length of shoreline eroding	6.9 miles
Length of shoreline accreting	0 miles
Total length of shoreline	6.9 miles

REACH NO. 7

Av. width lost to erosion	23.8 feet
Av. height of bank	3.5 feet
Length of shoreline erosion	5.4 miles
Length of shoreline accreting	0 miles
Total length of shoreline	6.1 miles

In the actual map, reaches two and six are classified as high erosion areas, reach number 5 as a moderate erosion area, and reaches one, three, four, and seven as low erosion areas. It is recognized that these reaches are

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averages and that the rate of erosion may vary considerably within a single reach, but the majority of the worst erosive areas are contained in the high erosion areas.

Areas experiencing a high rate of erosion are eligible for inclusion as *areas of environmental concern*. For a more detailed description of such areas and their significance, see the section entitled "Areas of Environmental Concern".

### Estuarine and Public Trust Waters

*Estuarine waters are defined as "... all the water of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers, and tributaries thereto...".* They are important because of the fish and marine life they support. Commercial vessels also utilize the navigable estuarine system for transportation of goods both within and outside the state.

*Public trust waters are defined as "... natural and man-made bodies of water that have significant public fishing resources, or areas where the public has acquired rights by prescription, custom, usage, dedication or any other means".* These areas are important because of the public need for recreation and navigation as well as for aesthetic reasons. Economically these areas provide income through commercial and sport fishing, other water-related recreation, tourism and shipping of goods in navigable waters.

Both estuarine and public trust waters are eligible for

inclusion as *areas of environmental concern*. For a more detailed description of such areas and their significance, see the section entitled "Areas of Environmental Concern".

#### Man-Made Hazard Areas

A man-made hazard area refers to such potential hazards as airports, bulk storage facilities containing flammable liquids, railroad lines and similar examples. Such areas are significant because of their very nature and that of the materials present.

Man-made hazard areas are constraints to development because of their dangerous potential. Development of any kind in close proximity to such an area should be carefully reviewed before it is allowed.

#### Historic Places

These areas of historic significance are listed or have been approved for listing by the North Carolina Historical Commission. These include: 1) places listed in the National Register of Historic Places, 2) places and properties owned, managed or assisted by the State of North Carolina, and 3) areas designated as a National Historic Landmark. Historic places are both fragile and non-renewable. They owe their significance to their association with American history, architecture and culture. Inappropriate development could destroy these

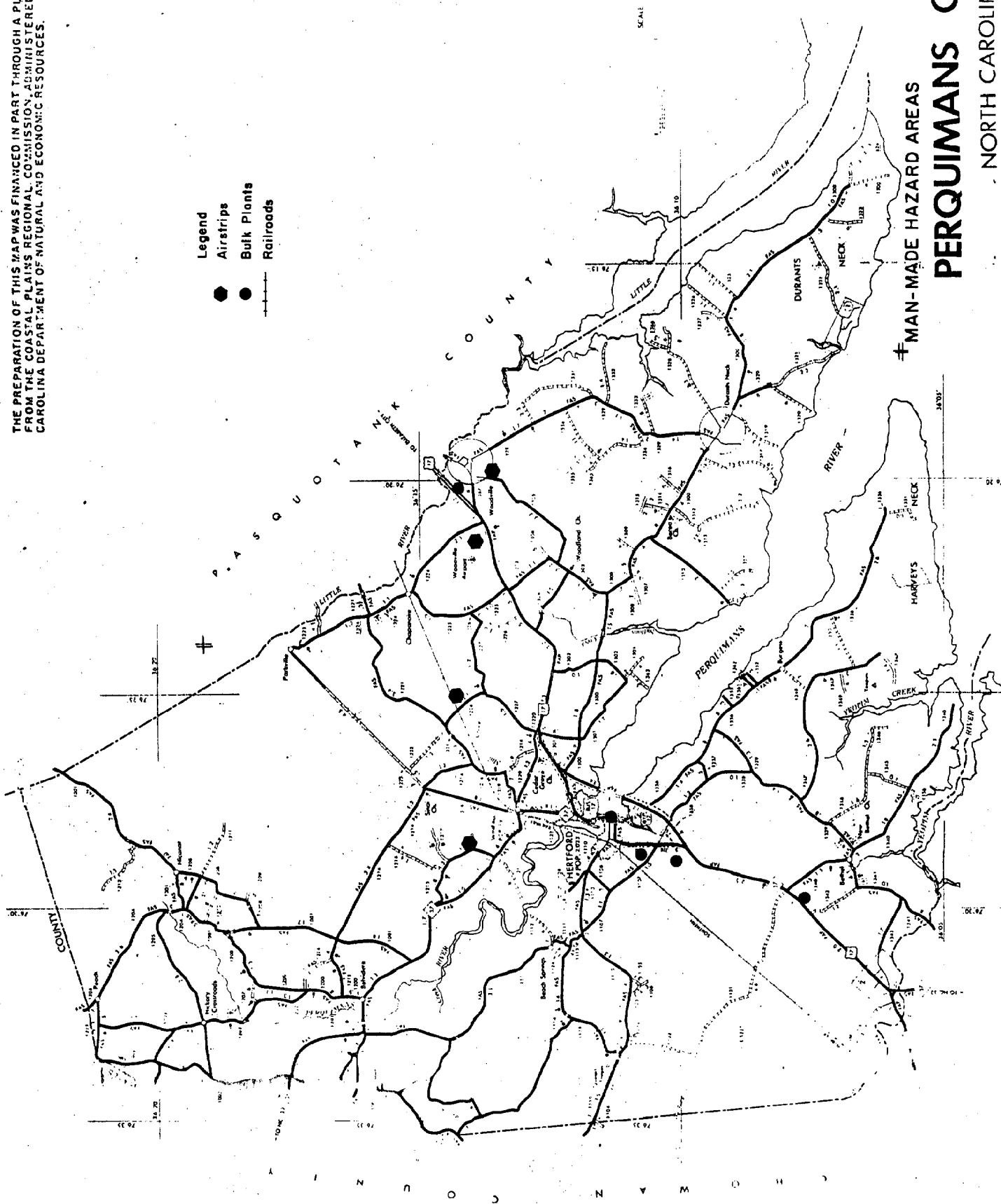
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- Legend**
- Airstrips
  - Bulk Plants
  - Railroads

MAN-MADE HAZARD AREAS

# PERQUIMANS COUNTY

NORTH CAROLINA



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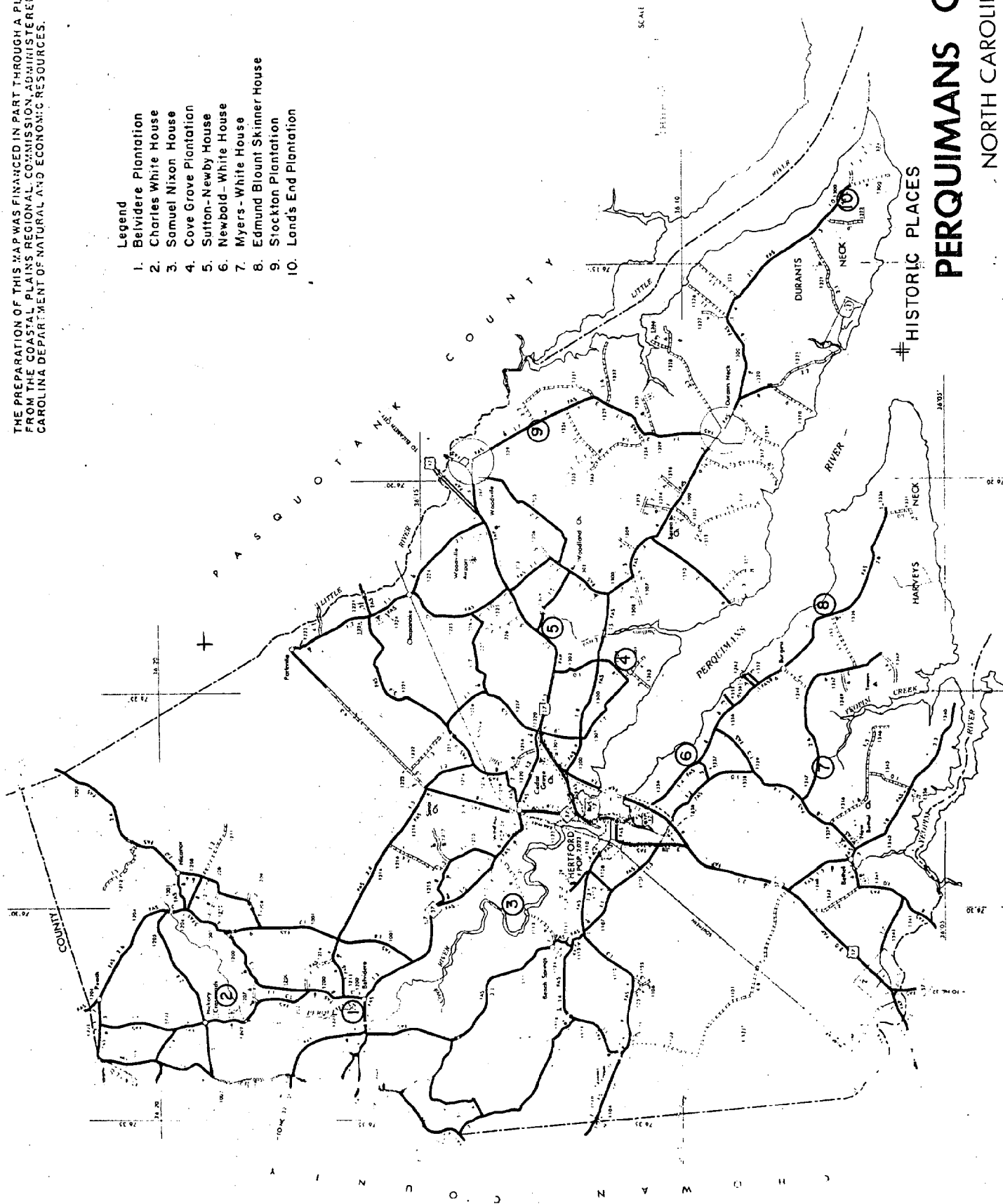
# Legend

1. Belvidere Plantation
2. Charles White House
3. Samuel Nixon House
4. Cove Grove Plantation
5. Sutton-Newby House
6. Newbold-White House
7. Myers-White House
8. Edmund Blount Skinner House
9. Stockton Plantation
10. Lord's End Plantation

## HISTORIC PLACES

# PERQUIMANS COUNTY

NORTH CAROLINA



valuable links with America's past.

Historic places falling into the second category listed above are eligible for inclusion as *areas of environmental concern*, although only one of the ten sites listed on the map meets this criteria. For a more detailed description of such areas and their significance see the section entitled "Areas of Environmental Concern".

#### Areas of Resource Potential

Areas of resource potential in Perquimans County are those which have important implications with regard to future developments. *Although they do not impose physical limitations, they do impose ecological and aesthetic ones.* Included are such areas as potential recreation sites, scenic areas, and areas of good agricultural potential. They are the types of areas which provide benefits to all when properly developed or preserved.

It is important to note that *areas of resource potential are not eligible for inclusion as areas of environmental concern.* There is no legal mechanism to restrict land use in such areas. The question of development is left up to local officials and concerned citizens. These areas are located and discussed to emphasize their potential; in order to enable those making land use decisions more fully aware of their significance to the people of Perquimans County.

### Soil-Related Agricultural Potential

It has been previously stated that agriculture is the most important industry in Perquimans County and, thus, bears close scrutiny. With this fact in mind, it is extremely important to identify prime agricultural land.

The ratings used are *good*, *fair* and *poor*. They are applied as the soils occur naturally and are based on 1) the suitability of each soil for growing all the major crops adapted to the County and 2) the yield potential of each soil-crops combination under good management. These ratings are explained below.

*Good*- These are the best soils in the County for agriculture. All crops adapted to this area may be grown and excellent yields are attained with good management.

*Fair*- These soils have moderate to severe limitations which limit crop selection and/or reduce yield potentials. These soils are either too wet, steep or too sandy to be rated good.

*Poor*- These soils have very severe limitations for general agriculture due to the high water table and frequent flooding. Yields of adapted crops (water tolerant) range from poor to good but crop damage is very frequent due to flooding.

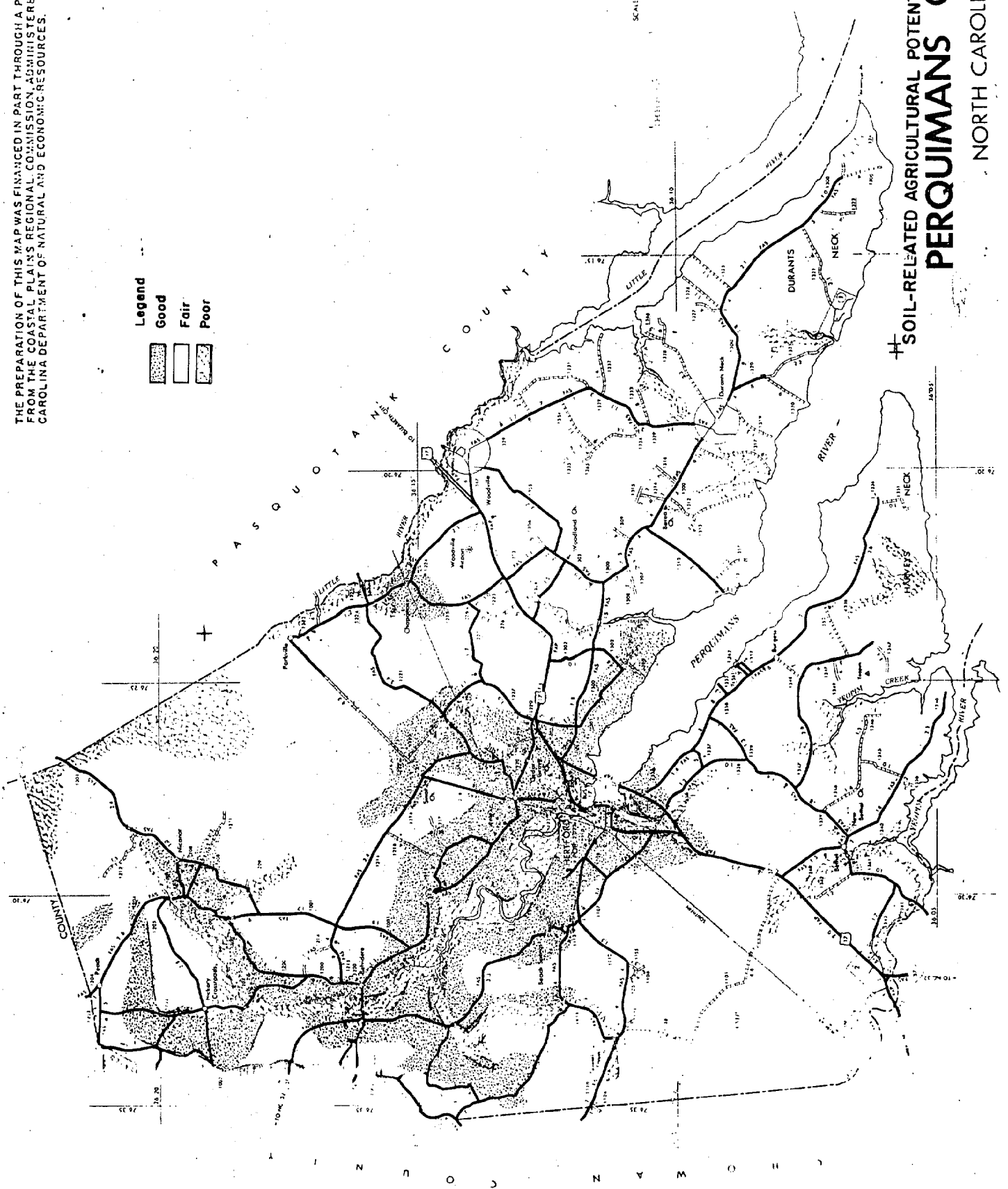
### Areas of Recreation Potential

As previously stated, one of the most often voiced citizen complaints in the Perquimans County Land Use Survey was the lack of recreation facilities. For this

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**Legend**

	Good
	Fair
	Poor



SOIL-RELATED AGRICULTURAL POTENTIAL  
**PERQUIMANS COUNTY**  
 NORTH CAROLINA

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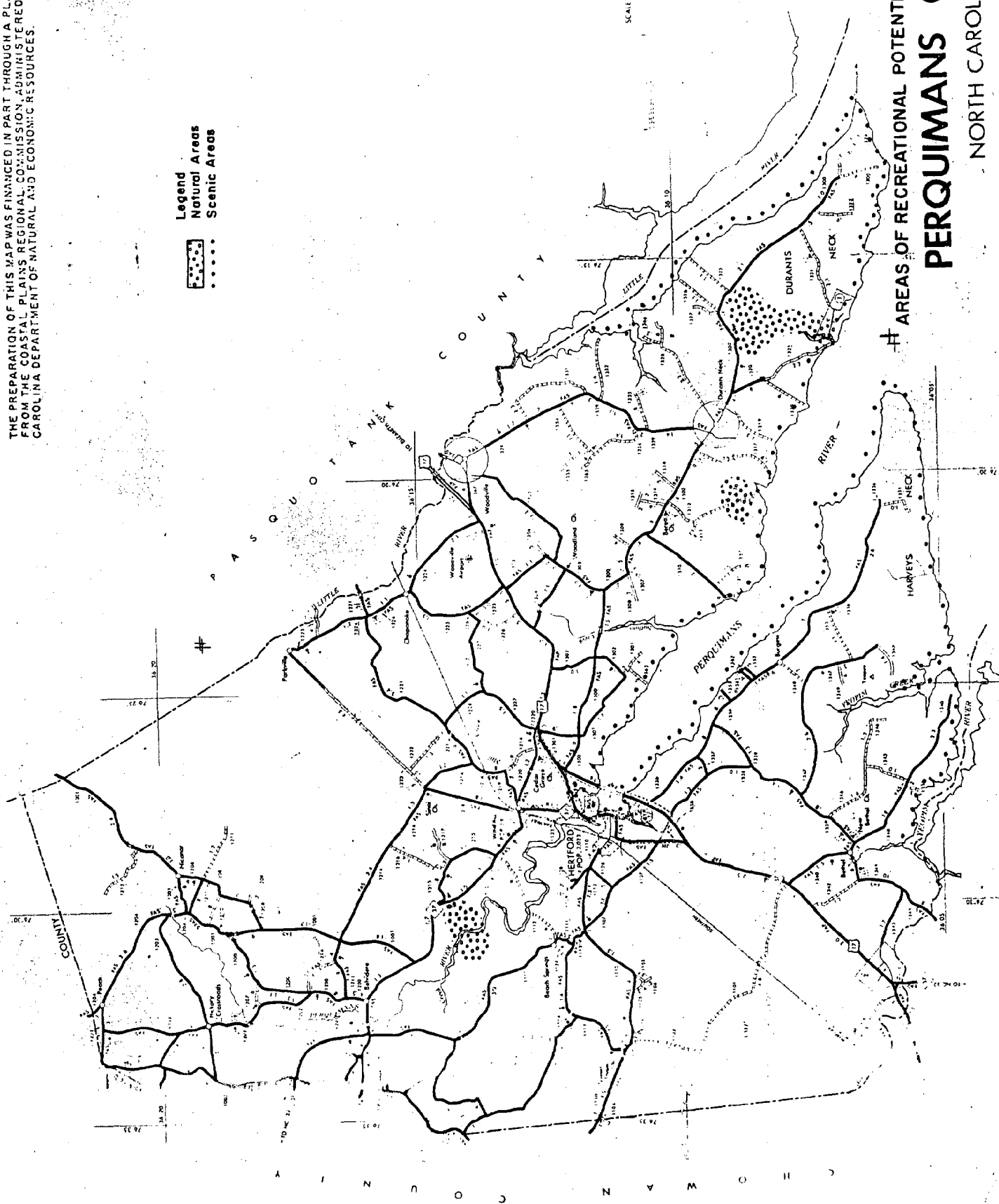
Legend  
Natural Areas  
Scenic Areas



# PERQUIMANS COUNTY

NORTH CAROLINA

AREAS OF RECREATIONAL POTENTIAL





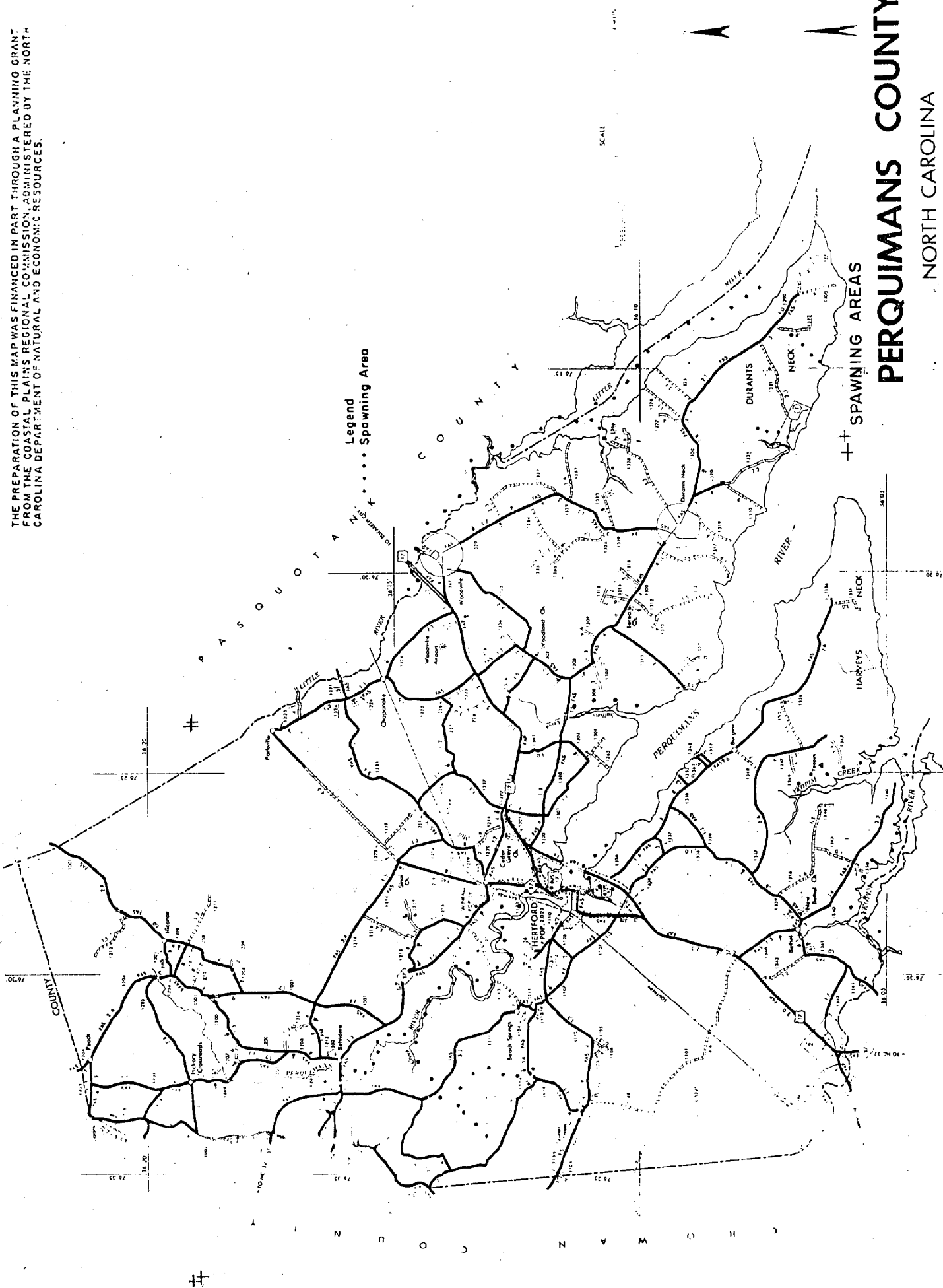
reason, areas with significant recreation potential have been located and delineated. County and Town residents are fortunate to have the number of scenic vistas that are available for recreational development, providing both governmental bodies with a wide range of options.

#### Fish Spawning Areas

Perquimans County, with its many rivers and streams, provides ideal spawning areas for many species of fish, both fresh and salt-water. These areas have been identified in order to guide development which may occur. Any destruction or significant alteration of these environments should be carefully weighed in order to determine whether the total effect is beneficial or harmful.

In many instances, these areas are subject to restrictions as complex natural areas, estuarine erodible areas and other areas of environmental concern designations. However, their importance as fish spawning areas should be taken into account by those making land use decisions.

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# PERQUIMANS COUNTY

NORTH CAROLINA

SOIL INTERPRETATIONS FROM GENERAL SOILS MAP  
PERQUIMANS COUNTY, N.C.

LIMITATIONS FOR

1 of County	SOIL ASSOCIATION	1 in Association	Septic Tank Filter Fields	Dwellings w/o Basements	Small Commer- cial Buildings	Local Roads and streets	General Agriculture 1/ 2/	
21	1. Conetoe-Wando-Dragston Conetoe Wando Dragston	35% 30% 20%	Slight Slt.LFC. Sev.Fl.Wt.	Mod.Fl. Slight Sev.Wt.	Mod.Fl. Slight Sev.Wt.	Slight Slight Mod.Wt.	Good Fair Fair	Fair Fair Fair
46	2. Bladen-Lenoir-Craven Bladen Lenoir Craven	40% 30% 15%	Sev.Wt.Fl. Sev.Wt.Perc. Sw.Wt.Perc.	Sev.Wt.Fl. Sev.Wt.Sh-Sw. Sw.Sh-Sw.	Sev.Wt.Fl. Sev.Wt.Sh-Sw. Sw.Sh-Sw.	Sev.Wt.Fl. Sev.Sh-Sw. Sw.Sh-Sw.	Poor Fair Good	Fair Fair Good
32	3. Bladen-Bayboro-Portsmouth Bladen Bayboro Portsmouth	30% 30% 25%	Sev.Wt.Fl. Sev.Wt.Fl. Sev.Wt.Fl.	Sev.Wt.Fl. Sev.Wt.Fl. Sev.Wt.Fl.	Sev.Wt.Fl. Sev.Wt.Fl. Sev.Wt.Fl.	Sev.Wt.Fl. Sev.Wt.Fl. Sev.Wt.Fl.	Poor Poor Poor	Fair Good Good
11	4. Bertie-Tomotley-Altavista Bertie Tomotley Altavista	30% 30% 25%	Sev.Wt. Sev.Wt.Fl. Mod.-Sev.Wt.	Mod.Wt. Sev.Wt.Fl. Mod.Wt.	Mod.Wt. Sev.Wt.Fl. Sev.Wt.Fl.	Mod.Wt.LS. Sev.Wt.Fl. Sev.LS	Good Poor Good	Good Good Good
21	5. Wickham-Altavista-Wahee Wickham Altavista Wahee	40% 35% 15%	Slt.-Mod. Mod-Sev.Wt. Sev.Fl.Perc.	Slt.-Mod. Mod.Wt. Sev.Wt.Fl.	Slt.-Mod. Sev.Wt.Fl. Sev.Wt.Fl.	Slight Sev.LS Sev.Fl.Wt.	Good Good Fair	Good Good Good
51	6. Dorovan-Johnston Dorovan Johnston	60% 20%	Sev.Fl. Sev.Fl.	Sev.Fl. Sev.Fl.	Sev.Fl. Sev.Fl.	Sev.Fl. Sev.Fl.	Poor Poor	Poor Poor
21	7. Dare-Ponzer-Wasda Dare Ponzer Wasda	40% 40% 10%	Sev.Fl. Sev.Fl. Sev.Wt.Fl.	Sev.Fl. Sev.Fl. Sev.Wt.Fl.	Sev.Fl. Sev.Fl. Sev.Wt.Fl.	Sev.Fl. Sev.Fl. Sev.Wt.Fl.	Poor Poor Poor	Poor Good Good

For an explanation of the ratings used above, see the following page.

## DEFINITIONS OF SOIL LIMITATIONS

- NONE TO SLIGHT- Soils have properties favorable for the rated use. Limitations are so minor that they can be easily overcome. Good performance and low maintenance can be expected from these soils.
- MODERATE - Soils have properties moderately favorable for the rated use. Limitations can be overcome or modified with planning, design, or special maintenance.
- SEVERE- Soils have one or more properties unfavorable for the rated use. Limitations are difficult and costly to modify or overcome requiring major soil reclamation, special design, or intense maintenance.

## ABBREVIATIONS FOR LIMITING FACTORS:

Sev. - Severe	Mod.- Moderate	Slt.- Slight
F1-Flood Hazard		Text-Texture
Wt-Water table and wetness		LFC-Low Filter Capacity
Sh-Sw-Shrink-Swell Potential		Cor-Corrosion Potential
Perc-Percolation		<u>1</u> /Tobacco, Peanuts and
TSC-Traffic Supporting Capacity		Truck
LS-Low Strength		<u>2</u> /Corn, Soybeans & Small
		Grain

NOTE: In some instances when adequate mechanical measures have been applied or installed soils rated as "severe" can be upgraded to a "moderate" limitation, i.e. Subsurface drainage applied to Altavista.

SOURCE: U.S. Soil Conservation Service

## POTENTIAL AREAS OF ENVIRONMENTAL CONCERN

One of the most important parts of Coastal Management in Perquimans County is the identification of Areas of Environmental Concern. The 1974 Coastal Area Management Act stipulates that local land use plans "... shall give special attention to the protection and appropriate development of Areas of Environmental Concern".

Under the Act, a permit will be required for development in areas of environmental concern once they have been identified and designated as such by the Coastal Resources Commission. Permits for *major developments* will be handled by the Commission, with those for *minor developments* to be handled by local government. The identification and delineation by local governments will not serve as a designation of areas of environmental concern for the purposes of permit letting. The actual designation for purposes of the permit program shall be by a written description adopted by the Commission, and such designations will be equally applicable to all local governments in the coastal areas.

### Coastal Wetlands

Coastal wetlands are defined as "any salt marsh or other marsh subject to regular or occasional flooding by tides..." which contain specific types of plants. These wetlands are important because they are ideal wildlife and

waterfowl areas, serve to help stop shoreline erosion, and provide a source of food for small fresh and salt water fishes.

Policy Objective: To give a high priority to the preservation and management of the marsh so as to safeguard and perpetuate their important values.

Appropriate Land Uses: To be those consistent with the above policy objective. The highest priority shall be allocated to the conservation of existing marshlands; second to development which requires water access and cannot function anywhere else. In no case shall such marshland be destroyed unless the loss would be offset by a clear and substantial benefit to the public.

#### Estuarine Waters

Estuarine waters are defined as, "all the water of the Atlantic Ocean within the boundary of North Carolina and all the waters of the bays, sounds, rivers and tributaries..." as described by 'Boundary Lines, North Carolina Commercial Fishing - Inland Fishing Waters'. These areas not only support valuable commercial and sports fisheries, but are also utilized for commercial navigation, recreation and aesthetic purposes.

Policy Objective: To preserve and manage estuarine waters so that present activities in these waters will continue to be productive and enjoyable.

Appropriate Land Uses: To be consistent with the above policy objective. The highest priority shall be allocated to the conservation of estuarine waters; second to land uses not harmful to the present uses of the waters. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoil below mean high tide, cause adverse water circulation patterns, violate water quality standards or cause degradation of shellfish waters are considered incompatible with the management of such waters.

#### Public Trust Waters

Public trust waters are those natural and man-made bodies of water to which the public has rights of access. Such rights in these waters include commercial and sport fisheries, commercial navigation and recreation.

Policy Objective: To protect public rights for navigation and recreation and to preserve and manage the public trust waters so as to perpetuate the present condition and use of the waters.

Appropriate Land Uses: To be consistent with the above policy objective. Such use which interferes with the public right of navigation or other public trust rights shall not be allowed. Only uses which are not detrimental to the biological and physical functions and public trust rights shall be allowed.

### Complex Natural Areas

Complex natural areas are defined as lands that support native plant and animal communities and provide habitat conditions that have remained essentially unchanged by human activity. These areas provide the few remaining examples of conditions that existed prior to settlement by Western man.

Policy Objective: To preserve the natural conditions of the site so as to safeguard its existence as an example of naturally occurring, relatively undisturbed plant and animal communities of major scientific or educational value.

Appropriate Land Uses: To be consistent with the above policy objective. Such lands shall not be developed in such a manner as to jeopardize the natural or primitive character of the area.

### Estuarine, Sound and River Erodible Areas

Erodible areas are defined as areas where soil and water conditions are such that there is substantial possibility of shoreline erosion. Development within such areas is subjected to this erosion unless special development standards and preventive measures are employed.

Policy Objective: To insure that development occurring within these areas is compatible with the potential erosive nature of the area.

Appropriate Land Uses: To be consistent with the above policy



objective. Recreational, rural and conservation activities represent appropriate land uses where protective construction has not been undertaken. All other types of development are inappropriate unless measures have been taken to prevent erosion.

#### Historic Places

Historic places are defined as places that are listed or have been approved for listing by the North Carolina Historical Commission in the National Register of Historic Places *and are publicly-owned*. These resources are both fragile and nonrenewable, and owe their significance to their association with American history, architecture and culture.

Policy Objective: To protect and preserve the integrity of districts, sites, buildings and objectives in the above categories.

Appropriate Land Uses: To be consistent with the above policy objective. Land use which will result in substantial irreversible damage to the historic value of the area is inappropriate.

## SUMMARY

### Major Conclusions

#### Perquimans County

*In the next twenty-five years Perquimans County will not be forced to deal with a rapidly expanding demand for land and public services. The population is expected to remain about the same or even increase slightly. In the foreseeable future, Perquimans County should remain agriculturally oriented.*

The one area of the County which is beginning to show a definite change is the southern area along the rivers and the Albemarle Sound. The potential for recreational and second-home development is high and some construction of this type has already occurred. The land in this area is characteristically flat, wooded, has a high water table and is prone to flooding. Along land bordering the rivers and the sound there are shoreline erosion problems. Development in this area must take these limitations into consideration.

The soil limitations for septic tanks and foundations, potential for polluting both ground and surface water from septic tanks, shoreline erosion and the protection of the natural beauty of the area all require careful attention and planning. The land is capable of sustaining residential growth, but unless the natural limitations of the area are considered, tremendous problems could result.

It has been recognized by the County Commission that

what is needed are revised subdivision regulations and good zoning ordinances. In this way, the growth that occurs will be good for the people who already live in the area, good for the new residents, and good for the County as a whole. They will make sure all new developments have adequate water, waste disposal, roads and other community facilities. They can protect much of the natural beauty of the area and insure that all new developments will be good places in which to live.

Other than in the southern portion of the County and around the Town of Hertford, it is not anticipated that there will be any significant growth in the next twenty-five years. This seems to be the way the majority of local citizens want things to be in the future. The extension of water lines to County residents could be extremely important in the distant future if population begins to increase rapidly, but for the next twenty-five years it should not have much effect on land use. In the largest part of the County, agriculture would be protected and undisturbed through zoning.

#### Town of Hertford

The Town of Hertford has remained approximately the same size for the last fifty years and population projections for the next twenty-five years indicate only slight growth. As a result, *Hertford will not have to deal with the problems associated with rapid growth.* Community facilities which are presently adequate should be so over the next ten to twenty-five years

assuming a constant upkeep and replacement program.

At present, studies are underway 1) to improve the sewer system by eliminating groundwater infiltration, 2) to improve housing conditions in the Town and, 3) to make more beneficial use of waterfront property and eliminate the storage of flammable fuels within the Town limits. Also of importance is the coordinated effort of both Town and County officials to promote industrial expansion in a planned industrial park near the Town. All of these efforts should enhance the desirability of Hertford, both as a place for people and industry to locate. If these projects are successful, it could mean more growth than has been projected.

Growth beyond what is currently projected would probably call for the extension of Town water and sewer lines, and the annexation of areas requiring municipal services. Although the undeveloped land on the Perquimans River side of the Town limits is primarily wetland and wooded swamp, almost all of the land on the western boundary is developable with water and sewer. It is in that direction and within existing Town limits that desired growth should occur.

#### Application of Data to the Plan

In formulating the Perquimans County Land Use Plan, data was obtained from a wide range of sources. These

included federal, state and local agencies as well as private individuals residing in the County. *An effort was made to correlate this technical data with the expressed desires of the people,* which were determined through the Perquimans County Land Use Survey and other efforts of the Citizen's Advisory Committee. For a full discussion of these efforts see Appendix B of this document.

In many cases, planning efforts in both Perquimans County and the Town of Hertford were aided by the fact that the stated desires of the people and the analytically projected conditions were similar. This is particularly true in the areas of projected population and economy. County and Town officials were relieved of the burden which would have been imposed by two radically different projections.

The data gathered locally by the Citizen's Advisory Committee and both planning boards, and the technical information garnered from a variety of governmental and other sources has been combined in this document. It represents a workable plan for the future of Perquimans County and one which fits the stated desires of a majority of its residents.

APPENDIX A

PERQUIMANS COUNTY LAND USE SURVEY AND RESULTS

Cover Letter

Dear Perquimans County Resident:

The attached questionnaire is a chance to voice your opinion on future land use and development in your county.

It is important!

Please read and consider each question very carefully and answer them.

Your Citizen Advisory Committee urgently needs your opinion on this issue.

Complete and mail this questionnaire as soon as possible.

Thank you for your cooperation.

Sincerely,

Jesse P. Perry, Chairman  
Wayne Ashley  
Bobby Jones  
L. Clinton Winslow  
Donald Madre  
Julian White  
Shelton Morgan  
Paul Smith, Jr.

# Perquimans County Land Use Survey: Questionnaire and Results

## Total Responses

### I. PERSONAL CHARACTERISTICS

- 518 1. Are you presently a resident of Perquimans County?  
Yes 98.2 % No 1.8%
- 510 2. In which township do you live? (Circle One)  
A. Belvidere 11.6% B. Parkville 17.0 % C. Hertford 48.1%  
D. New Hope 9.4% E. Bethel 14.0 %
3. If you live in a community specify which one? Not Tabulated
- 491 4. Educational Attainment (Circle One)  
A. Grammar School 12.0% B. Junior High 6.7%  
C. High School 55.2% D. College 26.1%
- 501 5. Age (Circle One)  
A. 15-18 15.2 % B. 19-25 9.2 % C. 26-35 10.2 %  
D. 36-45 13.4 % E. 46-55 16.4 %
- 506 6. Occupation \_\_\_\_\_  
Business and related 52 (10.3%)  
Professional and technical 19 (3.8%)  
Farm related 76 (15.0%)  
General Labor 41 (8.1%)  
Managerial 16 (3.2%)  
Housewives 42 (8.3%)  
Educators and related 19 (3.8%)  
Skilled workers 40 (7.9%)  
Retired 72 (14.2%)  
Government 22 (4.3%)  
Students 81 (16.0%)  
No response 18 (3.6%)  
Other 8 (1.2%)
- 512 7. Sex Male 67.0 % Female 33.0 %
- 510 8. Race (Circle One)  
A. Black 26.9 % B. Caucasian 71.2 % C. Other 2.0 %
- 498 9. Number of years you have resided in county Not Tabulated.
- 455 10. Which of the following applies to you? (Circle One)  
A. Own Home 81.5 % B. Rent Home 15.6 % C. Own other prop-  
erty in county 2.9 %
- 513 11. Marital Status (Circle One)  
A. Single 22.4 % B. Married 65.9 % C. Widow or Widower  
D. Divorced 2.9 % 8.8 %

● Total  
Responses

- 499 12. Are you presently (Circle One)  
A. Employed 47.9 % B. Unemployed 4.4 % C. Retired 21.8%  
D. Full-time Homemaker 5.4 % E. Full-time student 13.8
- 460 13. Where is most or all of your income derived? (Circle One)  
A. Perquimans County 54.3% B. Tidewater Virginia 5.9 %  
C. Adjacent County 10.9% D. Other 28.9 %
- 505 14. How do you obtain most of your information about activities in the county? (Circle One)  
A. Newspaper 54.3% B. Through radio 5.1%  
C. Through TV 3.2% D. By word of mouth 34.9%  
E. Other 2.6%
- 410 15. How long do you anticipate living in Perquimans County? Not Tabulated

II. COMMUNITY ASSESSMENT

- 524 1. What do you like most about Perquimans County?  
Friendly people 167 31.9%  
Small size & relaxed atmosphere 141 26.9%  
Environment (hunting, fishing, etc) 155 29.6%  
Low Crime rate 51 9.7%  
Other 10 1.9%
- 459 2. What do you like least about Perquimans County?  
Lack of cultural activities 14 3.1%  
Little industry & job opportunity 101 22.0%  
Recreational facilities 64 13.9%  
Water and Sewer 7 1.5%  
Lack of medical facilities 16 3.5%  
Lack of shopping facilities 28 6.1%  
Roads 14 3.1%  
Police protection 16 3.5%  
Racial prejudice 24 5.2%  
Trash and litter 14 3.1%  
School system and facilities 33 7.2%  
Taxes 8 1.7%  
Planning and zoning 23 5.0%  
Other 97 21.0%
- 827 3. What are the three most serious problems in the County?  
Medical Facilities 54 6.5%  
Educational facilities 58 7.0%  
Industry and jobs 172 20.8%  
Roadside dumps and litter 16 1.9%  
Soil erosion 9 1.1%  
Recreation facilities 94 11.4%  
Taxes 7 0.8%  
Land clearance and development 17 2.1%



Total  
Responses

Planning and zoning	25	3.0%
Shopping facilities	31	3.7%
Housing	20	2.4%
Roads	28	3.4%
Police protection	45	5.4%
Pollution	25	2.1%
Other	155	18.7%
Water and sewer	49	5.9%
No communication	22	2.7%

- 492      4. In your opinion, which of the following should the county adopt as its policy for county population growth during the next 10 years? (Circle one)
- |                         |      |
|-------------------------|------|
| A. Remain the same size | 18.7 |
| B. Small increase       | 43.1 |
| C. Substantial increase | 35.2 |
| D. Reduce population    | 3.0  |
- 497      5. Would you like to see more tourists come to Perquimans County?      Yes 75.3      No 24.7
- 434      6. What, if any, type of tourist facilities do you think should be developed in this area?
- |                         |     |       |
|-------------------------|-----|-------|
| Historical preservation | 79  | 18.2% |
| Motel and restaurant    | 128 | 29.5% |
| Hunting and fishing     | 23  | 5.3%  |
| Camping facilities      | 33  | 7.6%  |
| Parks                   | 49  | 11.3% |
| Boating facilities      | 40  | 9.2%  |
| Beaches                 | 30  | 6.9%  |
| Other                   | 52  | 12.0% |
- 518      7. What, if any, additional recreational facilities would you like to see in Perquimans County?
- |                           |     |       |
|---------------------------|-----|-------|
| Tennis Courts             | 75  | 14.5% |
| Golf course               | 25  | 4.8%  |
| Playgrounds and parks     | 108 | 20.8% |
| Youth activities          | 90  | 17.4% |
| Boating facilities        | 18  | 3.5%  |
| Swimming                  | 40  | 7.7%  |
| Camping                   | 6   | 1.2%  |
| Theatre and Bowling Alley | 73  | 14.1% |
| Other                     | 83  | 16.0% |
- 157      8. In your opinion, do you think that the county has any environmental problems?      Yes 50.6      No 49.4
- If so, what?
- |                           |    |       |
|---------------------------|----|-------|
| Water pollution           | 62 | 39.5% |
| Land clearance            | 15 | 9.6%  |
| Water and sewer           | 10 | 6.4%  |
| Roadside dumps and litter | 40 | 25.5% |
| Erosion                   | 7  | 4.4%  |
| Other                     | 23 | 14.6% |

●  
Total  
Response

- 475 9. In your opinion, do you think that the county has any environmental problems? Yes 50.6% No 49.4% If so, what is needed.
- 480 10. In your opinion, do the citizens of Perquimans County have adequate opportunity to participate in local government and community affairs? Yes 63.3% No 36.7%

● III. COUNTY GOAL FORMULATION

- 1. What is your attitude toward the following statements:

		Agree Strongly	Agree	Neutral	Disag.	Disagre Strongly
457	(a) Economic development is more important than environmental protection.	10.7%	22.3%	15.5%	32.2%	19.2%
477	(b) The county's future development must be planned.	49.7%	44.4%	4.2%	0.8%	0.8%
487	(c) Our natural resources and wildlife should be protected.	53.4%	40.9%	4.1%	0.6%	1.0%
470	(d) There should be more control of land development.	35.1%	37.2%	18.7%	6.6%	2.3%
472	(e) Our historic assets should be preserved.	45.1%	36.7%	15.0%	2.3%	0.8%
481	(f) The appearance of our county needs to be improved.	47.2%	40.3%	8.5%	2.5%	1.5%
480	(g) More industry is needed to supplement existing agricultural base.	42.5%	38.5%	9.8%	6.0%	3.1%
468	(h) Emphasis on future growth should be concentrated in existing communities (Ex. Hertford, Winfall, Belvidere, etc.)	30.8%	41.5%	17.3%	6.2%	4.3%
473	(i) The area needs more agricultural related industries.	28.5%	42.1%	20.1%	6.8%	2.5%

Total  
Response

		Agree Strongly	Agree	Neutral	Disag.	Disagree Strongly
471	(j) The county needs more technical industries.	30.6 %	42.5%	18.0%	5.7%	3.2%
474	(k) The county's agricultural lands are very important and must be protected or maintained from uncontrolled or unrestrained residential, commercial or industrial development.	35.9%	40.9%	11.8%	7.8%	3.6%
484	(l) Perquimans County is primarily rural/agricultural oriented. It should remain this way.	23.1%	33.5%	15.3%	21.3%	6.8%
482	(m) There should be limited control of shoreline development.	21.4 %	38.6 %	24.3 %	11.8 %	3.9 %
484	(n) Since the agricultural lands of the county are of primary importance and drainage is essential, the county should strongly push for a federally supported comprehensive drainage program.	37.0 %	39.0 %	15.1 %	5.6 %	3.3 %

2. Do you feel the following are adequate in Perquimans County?

		Agree Strongly	Agree	Neutral	Disag.	Disagree Strongly
478	(a) Road maintenance and upgrading.	11.1%	42.1%	7.5%	28.9%	10.5%
478	(b) Water facilities.	9.8%	38.1%	12.1%	28.9%	11.1%
473	(c) Sewer facilities.	9.5%	34.5%	16.3%	29.4%	10.1%
483	(d) Fire protection.	16.8%	48.7%	13.5%	15.1%	6.0%
477	(e) Historic preservation.	10.3%	37.1%	22.6%	23.7%	6.3%
472	(f) Electrical utilities.	12.9%	54.2%	12.1%	12.5%	8.3%

Total  
Response

		Agree Strongly	Agree	Neutral	Disag.	Disagree Strongly
471	(g) Storm water drain- age and flooding control.	8.3%	31.0%	23.4%	27.4%	10.0%
476	(h) Community appear- ance.	8.8%	23.7%	17.2%	38.7%	11.6%
474	(i) Protection of the natural environment and wildlife.	11.0%	38.8%	17.3%	25.3%	7.6%
475	(j) Proper housing.	9.3%	30.1%	18.5%	31.8%	10.3%
475	(k) Planning and community develop- ment.	6.7%	24.4%	22.7%	34.1%	12.0%
469	(l) Zoning and land use controls.	5.3%	24.1%	30.7%	30.5%	9.4%
477	(m) Relationship between the county and towns.	9.4%	35.0%	22.4%	23.7%	9.4%
459	(n) Code enforcement and inspection.	6.5%	28.3%	34.6%	17.9%	12.6%
471	(o) Refuse collection or disposal.	10.0%	48.8%	14.9%	17.2%	9.1%
477	(p) Educational facili- ties.	9.0%	29.1%	14.5%	28.7%	18.7%
455	(q) Cultural facilities.	5.5%	22.4%	25.1%	31.4%	15.6%
485	(r) Rescue and ambulance service.	23.3%	55.3%	8.0%	9.1%	4.3%

3. What is your attitude toward the county doing the following:

		Agree Strongly	Agree	Neutral	Disag.	Disagree Strongly
473	(a) Attract more indus- try.	38.0%	34.2%	9.3%	5.9%	5.7%
468	(b) Impose additional taxes if they would increase economic activity and reduce unemployment.	12.8%	23.3%	15.8%	25.4%	22.6%

Total  
Response

		Agree Strongly	Agree	Neutral	Disag.	Disagree Strongly
472	(c) Provide more land use control and zoning.	17.2%	37.5%	27.1%	11.7%	6.6%
456	(d) Restrain urban growth.	9.4%	16.2%	28.1%	33.8%	12.5%
450	(e) Promote urban growth.	18.0%	38.2%	25.3%	10.7%	7.8%
472	(f) Cooperate fully and interact posi- tively with the towns for total community growth.	35.6%	44.3%	15.7%	1.9%	2.5%

4. In general, are there any other comments or concerns you have about this county which were not covered by this questionnaire?  
( Not Tabulated)
- 
-

APPENDIX B

REPORT OF THE CITIZENS ADVISORY COMMITTEE

NOVEMBER 17, 1975

TO: Mr. Lester Simpson, Chairman, Perquimans County  
Commission

FROM: J. P. Perry, Jr., Chairman, Perquimans County  
Citizens Advisory Committee

SUBJECT: Report of the Citizens Advisory Committee to the  
County Commissioners

On February 17, 1975, the County Commissioners of Perquimans County appointed eight residents of the County to serve as a Citizens Advisory Committee. Appointed were Wayne Ashley, Bobby Jones, L. Clinton Winslow, Donald Madre, Jesse P. Perry, Jr., Julian White, Shelton Morgan and Paul Smith, Jr.

As its name implies, the Citizens Advisory Committee was charged with the responsibility of bringing to the attention of Perquimans County citizens the importance of recent NC legislation set forth in the Coastal Area Management Act. This Act will affect future land-use planning in twenty coastal North Carolina counties and requires each of those counties to submit a future land-use plan to the Coastal Resources Commission not later than November 25, 1975.

Following appointment of the Citizens Advisory Committee, a first meeting was held to inform the committee members of their duties and to familiarize them with the more relevant parts of the Coastal Area Management Act.

At a second meeting, Jesse P. Perry, Jr. was elected Chairman for the committee, and discussion was started on how the citizens of the County might best be made familiar with important provisions of the Act.

This report will not review the records of each of the Committee meetings. However, the following summary should be helpful to the Commissioners:

## SCHEDULED MEETINGS OF THE CITIZENS ADVISORY COMMITTEE

February 27, 1975. . . . .	Attendance. .19
March 19, 1975 . . . . .	. .19
April 16, 1975 . . . . .	. .17
May 12, 1975 . . . . .	. . 9
May 28, 1975 . . . . .	. .21
June 10, 1975. . . . .	. .22
July 16, 1975. . . . .	. .19
August 20, 1975. . . . .	. . 2

Many of the above meetings were held with the Perquimans County Planning Committee and with members of the Perquimans County Commissioners in attendance. At all meetings, a member to the NC Dept. of Natural and Economic Resources, Elizabeth City Branch Office, was present. These were staff members (planners) assigned to aid counties in the Albemarle area in their efforts to prepare land-use plans for the Coastal Resources Commission.

Mr. Steve Chapin from the Elizabeth City office was very helpful to the Committee, particularly during its first four meetings. He was joined in June by Mr. William C. Robbins, Jr., who was assigned as a full-time planner to assist with the development of a land-use plan for Perquimans County.

The Citizens Advisory Committee agreed that we would use four major methods to tell Perquimans County Citizens about the Coastal Area Management Act and to get their participation, views, ideas and suggestions regarding future land-use and development in the County. Those methods were:

1. Send a Land-use and development questionnaire to Perquimans County residents.
2. Schedule public meetings to discuss provisions of the Coastal Area Management Act.
3. Discuss the Act at local civic clubs and organizations such as the Hertford Town Council, the Winfall Town Council, Ruritan Clubs, Chamber of Commerce and Rotary Club.
4. Utilize the local press and radio for regular releases and announcements concerning the Coastal Area Management Act.

Mr. Curt Robbins, planner for Perquimans County, was very helpful to the Committee in all of these endeavors and members of the Committee were enthusiastic, interested and imaginative. The result was that an excellent questionnaire (sample attached) was mailed to approximately 2,500 Perquimans County residents. At the time of mailing the questionnaires, radio and press announcements appeared informing the public of the importance of the questionnaires and urging their return. As a result of this campaign, a 25% response was obtained from addresses--this is considered to be an excellent return.

The returned questionnaires were reviewed and the answers--when tabulated--gave a clear picture of how a majority of the County residents feel about many important future land-use and development questions (copy attached). Chairman of the Committee made available to members of the Perquimans County Planning Committee and to the County Commissioners the results of the questionnaire-survey.

At the same time that the questionnaire was mailed, public meetings were held in each of the County townships. These were arranged by the Committee member from the township and, in general, were successful with the exception of the meeting held in New Hope where only one person showed up. The schedule of community meetings held was as follows:

<u>DATE</u>	<u>TIME</u>	<u>COMMUNITY</u>	<u>PLACE</u>
June 19	8:00 PM	Belvidere	Community Building
June 24	8:00 PM	Winfall	Community Building
June 26	7:30 PM	Bethel	Regular meeting Bethel Ruritans
June 27	8:00 PM	Whiteston	Community Building
July 1	7:30 PM	Parkville	Regular meeting Parkville Ruritan
July 10	8:00 PM	Hertford	County Office Building

In addition to the above meetings, the Committee was fortunate in having Mr. Erie Haste--member of the Coastal Area Commission--appear as speaker on a number of occasions. Mr. Curt Robbins was able to arrange for Mr. David Stick, also a member of the Coastal Area Commission, to appear as a guest-speaker at a public meeting held at the Perquimans County Courthouse on July 8.

In the field of public communications, via the local press, the Committee was fortunate to have the enthusiastic cooperation of the Perquimans Weekly on the Coastal Area



Management Act, and Land-Use Planning and Development appeared in the Weekly (see attached slippings). Additional articles appeared at earlier dates, but the above period represented a special effort to focus attention of the County citizens on the importance of the Coastal Area Management Act. The Daily Advance also carried a number of articles that reached residents who were not subscribers to the Perquimans Weekly.

Drawing on results of the questionnaire, the Citizens Advisory Committee developed--with the help of Mr. Curt Robbins--a statement of Land-Use Objectives, Policies and Standards. Copies of the Statement were sent to members of the County Planning Committee and to the County Commissioners (copy attached). It was the Committee's thought that such a statement would be helpful to the Planning Committee and to the Commissioners in drawing up a final Land-Use Plan for submission to the Coastal Area Commission. The Committee understands that a draft of the Perquimans County Land-Use Plan has now been submitted to the County Planning Committee and to the County Commissioners.

In working with citizens of the county, the Chairman of the Advisory Committee was asked to serve as a member of the town of Hertford's Committee which was also involved in developing a similar plan. Much of the work done at an earlier date by the County Committee was found to be helpful to the town Committee. The Town of Winfall--at an early date--agreed to "go along" with Plans and recommendations drawn up by the County Citizen's Advisory Committee.

In summary, the Citizens Advisory Committee feels that residents of Perquimans County--in general--are aware of the importance of the Land-Use and Development Plan to be submitted by the County to the Coastal Area Commission.

The Committee has one suggestion to make to the Commissioners viz, that the Commissioners present to residents of the County the important and significant parts of the plan--asking for advice, suggestions and comments.

Finally, the Committee would like to express its appreciation and thanks to Mr. Steve Chapin and Mr. Curt Robbins for their help and guidance during the past few months; to Mr. Richard Bryant and other members of the Perquimans County Planning Committee for their encouragement and help and to Mrs. Marjorie Fields for her unfailing kindness and helpfulness with meetings, notes and correspondence.

Respectfully submitted this 17th day  
of November, 1975

Jesse P. Perry, Jr., Chairman  
Perquimans County Citizens Advisory Committee

Wayne Ashley  
Bobby Jones  
L. Clinton Winslow  
Donald Madre  
Julian White  
Shelton Morgan  
Paul Smith, Jr.

cc: Mr. Curt Robbins, Jr.

## APPENDIX C

### A DISCUSSION AND COMPARISON OF FOREST AND AGRICULTURAL LAND USE IN PERQUIMANS COUNTY

Agriculture and forestry are the two largest industries in Perquimans County and, quite naturally, are the predominant land uses. Figures from the Census of Agriculture indicate that in 1959 the County had 87,611 acres in farms. By 1969 this figure had decreased by seven percent to 81,448 acres.

These figures are somewhat deceptive, however, when attempting to compare agriculture and forested acreage. They indicate that 52.4 percent of the total county land area in 1959 and 51.6 percent in 1969 were in farms; but *they do not indicate how much cultivated land and how much forested land are contained in the figures.* A 200 acre farm with 100 acres of woodland and 100 acres of cropland or pasture is simply counted as 200 acres of farmland using the Census of Agriculture methodology.

So although these figures do show a percentage decrease in the number of acres of farmland over the ten-year period, they cannot be interpreted to mean that the number of cultivated or forested acres in the County is decreasing. The decrease in farm acreage over the period can be attributed to a variety of factors including residential and commercial development, and the physical expansion of such corporations

as Weyerhaeuser and Union Camp.

Figures compiled by the North Carolina Soil and Water Conservation Committee in the North Carolina Conservation Needs Inventory provide a much more detailed breakdown. These are shown below.

Land Use Acres in Inventory - Perquimans County

	<u>1958</u>	<u>1967</u>
CROPLAND	57,000	57,901
PASTURE	2,543	4,393
FOREST	102,474	95,560
OTHER LAND	2,200	4,072
TOTAL ACREAGE	164,217	161,926

SOURCE: North Carolina Conservation Needs Inventory

It must be noted that the total number of acres in the County differ slightly with respect to 1958 and 1967 totals. This can be attributed to reporting error and the problem of river and sound erosion, which is discussed at length in the body of the plan, itself.

During the study period from 1958 to 1967, the amount of cropland increased slightly while the number of forested acres declined. This is a trend which appears to be continuing and even accelerating. The United States Department of Agriculture, Forest Resource Bulletin places the number of forested acres at 86,672 in 1974.

The trend in agriculture and forestry would appear to

be fundamentally the same. Increasing mechanization, the introduction of new hybrids, and modern management practices have dictated larger acreages and more uniform land use. In the forest industry this has meant the planting of more softwoods and the increasing importance of such corporations as Weyerhaeuser and Union Camp. In agriculture there has been a significant increase in average farm size and increased clearance activity to bring more acres under cultivation. In both industries drainage techniques have been employed to increase the suitability of parcels of land.

The net result, in terms of land use, has been that a large number of acres have been cleared of their natural cover, drained where necessary and put under cultivation or reseeded with hybrid pine. It is increasingly difficult for farmers and landowners, in general, to ignore the *opportunity costs* associated with native stands of trees. Clearance activities, particularly in the northeastern part of the County, have been fairly extensive in the last ten years.

In 1973, according to the North Carolina Forest Service, Perquimans County produced a total of 24,232,000 board feet of sawtimber, veneer and plywood; and 21,091 cords of pulpwood. A detailed listing is shown on the following page.

## PERQUIMANS COUNTY COMMODITY DRAIN SURVEY

### Sawtimber: (Board Feet)

Yellow Pine	16,128,000
Other Softwood	88,000
Soft Hardwood	775,000
Hard Hardwood	1,137,000
TOTAL	18,128,000

### Veneer and Plywood: (Board Feet)

Softwood	4,892,000
Soft Hardwood	714,000
Hard Hardwood	498,000
TOTAL	6,104,000

### Pulpwood: (Standard Cords)

Pine	6,933
Hardwood	14,158
TOTAL	21,091

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Source: County Figures for Forest Products Drain, 1973

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The last year for which sales figures are available is 1975 and according to the Agricultural Extension Service, these totaled 192,500 dollars. From Forestry Service and Extension Service figures, *the most important forest product appears to be sawtimber* both in terms of total cut and sales figures. Pulpwood appears to be of importance but not as economically significant as sawtimber.

*The most important field crops in the County, according to Agricultural Extension Service figures for 1975, are soybeans, corn and peanuts, in that order.* Total sales in

dollars were 5,580,000, 5,249,600, and 1,452,080, respectively. Other economically significant field crops in 1975 were wheat, with total sales of 308,000 dollars, and oats, with total sales of 217,500 dollars. Sweet corn, which is not tabulated with the variety used for grain and silage, accounted for 275,975 dollars in sales.

Other vegetables and berries, and fruits and nuts did not have total sales which could be considered economically significant. In this same category are both poultry products and commercial fish production, although poultry products were more important than the later.

The final area of importance in the County is livestock production, with swine the most economically significant product. Total sales in 1975 were 5,985,148 which surpasses the total sales from soybeans. Beef cattle, dairy cattle, sheep and other livestock did not appear to be of major importance.

## APPENDIX D

### Water Quality in Perquimans County

Of the 323 square miles of surface area in Perquimans County, approximately 77 are covered with water and still others are subject to seasonal flooding. Three rivers, the Perquimans, Yeopim and Little, are found in the County and the Albemarle Sound forms its southern border. Water resources are extremely important to County residents for commercial, recreational and aesthetic purposes.

In 1971 the General Assembly passed the "Water and Air Quality Reporting Act" in an attempt to protect the surface waters of the state from pollution. This involves a monthly monitoring program of wastewater treatment facilities to determine the efficiency of facilities and the effects of wastewater discharges on receiving streams. The responsibility for administering this program is and has been assigned to the North Carolina Division of Environmental Management.

An important aspect of the monitoring program has to do with *stream classification*. The permitted uses of a body of water are limited by the actual "quality" of the water, in terms of pollution levels. A complete description of the classification system is outlined on the following pages.



## NORTH CAROLINA WATER CLASSIFICATION SYSTEM

### Fresh Waters

<u>Class</u>	<u>Description</u>
A-I	Suitable as a source of water supply for drinking, culinary, or food processing purposes after treatment by approved disinfection only, and any other usage requiring waters of lower quality.
A-II	Suitable as a source of water supply for drinking, culinary, or food processing purposes after approved treatment equal to coagulation, sedimentation, filtration and disinfection, etc., and any other usage requiring waters of lower quality.
B	Suitable for outdoor bathing, boating and wading, and any other usage requiring waters of lower quality.
C	Suitable for fish and wildlife propagation. Also suitable for boating, wading and other uses requiring waters of lower quality.
D	Suitable for agriculture and industrial cooling and process water supply, fish survival, navigation and other usage, except fishing, bathing, or as a source of water supply for drinking, culinary or food processing purposes.

### Tidal Salt Waters

<u>Class</u>	<u>Description</u>
SA	Suitable for shellfishing for market purposes and any other usage requiring waters of lower quality.
SB	Suitable for bathing and any other usage except shellfishing for market purposes.
SC	Suitable for fishing and any other usage except bathing and shellfishing for market purposes.

An important part of the classification system, particularly in the coastal region is the designation *swamp waters*.

These are defined by the Environmental Management Commission as waters which are topographically located so as to generally have low velocities and certain other characteristics which are different from adjacent streams draining steeper topography, and are designated by the letters "SW" in the schedule. These waters are typically slow-moving and more acidic than other fresh waters, and the "SW" designation simply tends to give more information about a body of water than if found in the A-D classification system.

The responsibility for assigning classifications to individual streams and other bodies of water belongs to the North Carolina Environmental Management Commission. In determining the safety of suitability of Class A-I and A-II waters, those to be used for human consumption, the Commission is guided by the physical, chemical and bacteriological standards specified in the 1962 edition of the "Public Health Service Drinking Water Standards" and "Rules and Regulations Providing for the Protection of Public Water Supplies" by the North Carolina Division of Health Services. When assigning B and SB classifications, the Commission must take into consideration the relative proximity of sources of pollution and recognize the potential hazards involved in locating swimming areas close to such sources. It will not assign these classifications to waters, the bacterial quality of which is dependent solely upon adequate disinfection, where the inter-

ruption of such treatment would render the water unsafe for bathing.

A complete listing of current water classifications found in the County is outlined below.

#### Water Classifications in Perquimans County

<u>Name of Stream</u>	<u>Description</u>	<u>Class</u>	<u>Date</u>
Little River	From source to mouth of Halls Creek	C Sw	4/1/61
Little River	From mouth of Halls Creek to Albemarle	SC	4/1/61
Deep Creek	From source to Little River	SC	4/1/61
Perquimans River	From source to Norfolk-Southern Railroad Bridge	C Sw	4/1/61
Goodwin Mill Creek	From source to Perquimans River	C Sw	4/1/61
Perquimans River	From Norfolk-Southern Railroad Bridge	SC	4/1/61
Toms Creek	From source to Perquimans River	D Sw	4/1/61
Mill Creek	From source to Perquimans County SR	C Sw	7/1/73
Mill Creek	From Perquimans County SR 1214 near Winfall to Perquimans River	SC	4/1/61
Raccoon Creek	From source to Perquimans County SR 1336 (Harvey Neck Bridge)	D Sw	4/1/61
Jennies Gut (Gum Pond Run)	From source to Raccoon Creek	C Sw	9/1/74
Raccoon Creek	From Perquimans County SR 1336 (Harvey Neck Bridge) to Perquimans River	SC	4/1/61
Perquimans River	From a line across the River from Barrow Point to Ferry Point to Albemarle Sound	SB	4/1/61
Sutton Creek	From source to a point	C Sw	4/1/61

<u>Name of Stream</u>	<u>Description</u>	<u>Class</u>	<u>Date</u>
	1.0 mile above Perquimans River	C Sw	4/1/61
Sutton Creek	From a point 1.0 mile above Perquimans River to Perquimans River	SC	4/1/61
Canaan Cove Creek	From source to its narrows	C Sw	4/1/61
Canaan Cove Creek	From its narrows to Perquimans River	SC	4/1/61
Muddy Creek	From source to Perquimans River	SC	4/1/61
Minzies Creek (Minns Cr.)	From source to Albemarle Sound	SC	4/1/61
Yeopim River	From source to Albemarle Sound	SC	4/1/61
Burnt Mill Creek	From source to Yeopim River	C Sw	4/1/61
Bethel Creek	From source to Yeopim River	C Sw	4/1/61
Yeopim Creek	From source to a point 2.0 miles above Yeopim River	C Sw	4/1/61
Yeopim Creek	From a point 2.0 miles above Yeopim River to Yeopim River	SC	4/1/61

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Source: DNER, Division of Environmental Management

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There are presently only two (2) waste treatment facilities in Perquimans County, both of which discharge into surface waters. The Town of Hertford municipal facility discharges into the Perquimans River, which is classified SC for several miles downstream and then from a line across the River from Barrow Point to Ferry Point, becomes SB to the Albemarle Sound. The SC classification in the segment of the River bordering the Town of Hertford is mandated under the provisions of the Water Classification System concerning bathing

areas in close proximity to potential sources of pollution, even though other factors are also important.

The Water Quality Management Plan for the Chowan River Basin (of which the Perquimans, Yeopim and Little Rivers are a part) indicates that several water quality contraventions have occurred which can be attributed to the Hertford facility. These contraventions are the result of ground water infiltration in the collector system. This problem is particularly severe after a heavy rain or particularly high wind tide and causes the treatment plant to become "overloaded". The net result is that sewage is not treated adequately under these conditions before it is discharged into the River.

The municipal waste treatment plant is a Class I facility and the "Water and Air Quality Reporting Act" requires that water samples be collected and tests made on a weekly basis. There is no provision in the Act that would require tests immediately after a large rain or extremely high tide, and, therefore, it is impossible to assess the impact of such occurrences on water quality. It must be assumed, however, that they are responsible for the contraventions which have occurred.

This problem is currently being addressed in a U. S. Department of Housing and Development 201 Facilities Plan. The planning area includes the Towns of Hertford, Winfall and a portion of Perquimans County. Funding allocated to date for

this project is \$120,000, which is available in federal construction grants. The political entities of the planning area have designated the Town of Hertford as lead agency, and the Town has made application for these funds. A qualified engineering firm has been retained to study the municipal waste disposal problems of the planning area and to prepare a facilities plan setting forth recommended actions necessary to solve the problems. Hopefully, this will serve to remedy the infiltration problem and its implications with regard to water quality.

The other waste treatment facility in the County is found in small lots for campers and discharges into Minzes Creek, a class SC stream. According to the North Carolina Division of Environmental Management, this facility is being properly operated although insufficient data is available to determine whether water quality has been contravened.

In the future, however, the facility will not be adequate for the needs of its users at peak capacity. As more camper lots are sold, the strain on the system will increase. During summer weekends operating capacity is characteristically high, but on weekdays and during colder months it is quite low.

At the request of the Division of Environmental Management, plans have been made to convert the facility from water discharge to a modified subsurface facility, utilizing earth mounds for treatment. A 10,000 gallon holding tank will be

constructed to accumulate effluent that cannot be treated during the weekends when the facility is operating at design capacity. This effluent can then be treated during the following weekdays when the facility is not being as heavily utilized. In this manner, the dual purpose of eliminating the possibility of contravening water quality standards in Minzes Creek, and modifying the impact of fluctuating loading rates is achieved. The artificial earthen mounds should serve to treat the effluent and prevent ground water contamination, providing a satisfactory solution to the waste treatment operation at Holiday Island.

Although the two (2) above-mentioned facilities presently discharge into bodies of water, they do not constitute the only possible sources of pollution.

Pollution can be introduced into surface waters from both "point and nonpoint sources". The Environmental Management Commission defines *point source* as "... any discernible, confined, and discrete conveyance, including, but specifically not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock or concentrated animal feeding operation from which waste is or may be discharged to the waters of the State."

Nonpoint sources are such things as agricultural runoff and the naturally-occurring accumulation of plant material in bodies of water. A degree of water quality degradation can be attributed to the chemical decomposition of such plant material, especially in "swamp" waters. The fact that swampwater is

characteristically found in areas of dense vegetation, and moves so slowly has important implications on the amount of naturally-occurring pollution.

In Perquimans County, as in the rest of the State of North Carolina, very little monitoring of agricultural runoff and concentrations of animal feeding operations has taken place. No data is available to examine their effect on water quality. Intuitively these could be sources of significant pollution if preventive measures are not taken. Both undoubtedly contribute to water quality problems in the County but it is difficult to determine to what degree. In order to thoroughly understand water quality and determine the impact of these operations, extensive sampling and research are necessary.

Another aspect related to water quality has to do with the use and regulation of septic tanks. Poor soil characteristics and a generally high water table throughout most of the coastal area tend to make conventional septic tank sewage disposal systems environmentally unsuitable for continued use in high density development. *Failure of septic systems means that either improperly treated sewage is being injected into shallow groundwaters of the area or that sewage effluent appears on the ground surface at sometime during the year to be washed into nearby surface waters with each subsequent rainstorm.*

When untreated septic wastes are injected directly into shallow groundwater, most of the groundwater pollution which results remains within the upper few feet of the water table.



The polluted groundwater then flows laterally and discharges into streams, sounds and other surface waters, usually causing deterioration of water quality.

Although Perquimans County has not experienced substantial high density development utilizing septic systems, problems do exist with regard to septic fields bordering rivers and the sound. In some instances septic fields have been eroded and in others, they are merely suspect. No hard data exists on which to base definitive statements.

*It must suffice to say that a problem does exist with regard to septic systems, especially in the southern portion of the County.* The primary responsibility for inspection and approval of such systems belongs to the District Health Department, whose regulations may be no less stringent than the minimum requirements of the rules and regulations promulgated by the Commission for Health Services. The opinion of the Engineering Section of the Division for Health Services, Department of Human Resources, however, is that "... the existing rules and regulations of the Commission for Health Services are not adequate to control the problems associated with the use of septic tanks in high density development, particularly in sandy soils where shallow wells are used for water supply and where development is adjacent to bodies of water, as is typical in the coastal area." Since the District Health Department utilizes the minimum rules and standards, it would seem that local septic tank ordinances must be inadequate to deal with

the problem discussed above.

### Summary

It has been established that while water quality in Perquimans County is adequate, it is by no means "good" and several bodies of water are apparently at least partially degraded. All of Toms Creek and part of Raccoon Creek are classified in the "D" category. All other waters, with the exception of a segment of the Perquimans River, are in the "C" category. Only the one section of the Perquimans River is certified as fit for bathing.

It cannot be determined, at this time, what the sources of pollutants are. In all likelihood it is a combination of several sources, some natural and some caused by man. Further research and sampling is necessary in order to reach more definite conclusions.

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